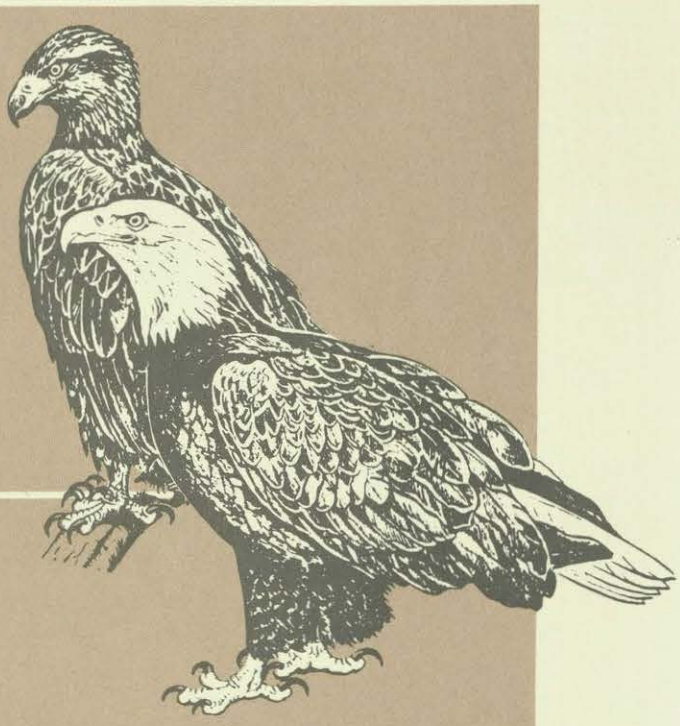
FLORIDA WILDLIFE®

Volume 40, Number 4 July-August 1986

HELP PROTECT FLORIDA'S BIRDS OF PREY

Southern Bald Eagle

Adults have white heads and white tails. Immatures are brown or mottled. Fairly common in peninsular Florida, but rarer in north Florida and in the panhandle.



Crested Caracara

A long-legged scavenger of central Florida's open scrubs and prairies. Often seen on the ground.

THESE BENEFICIAL BIRDS ARE AN IMPORTANT PART OF OUR ENVIRONMENT.

ALL HAWKS, OWLS AND VULTURES ARE PROTECTED BY STATE AND FEDERAL LAWS

FLORIDA GAME AND FRESH WATER FISH COMMISSION

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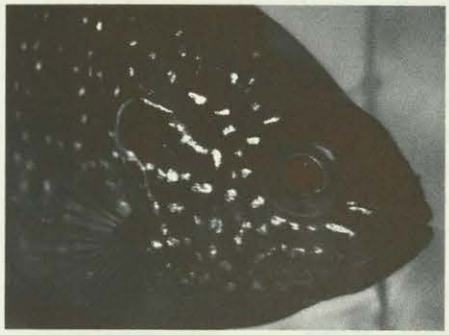

Native Aquariums, page 10

Natural Portraits, page 14

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2 **Old Harley and the Hog Hunt,** By Carson Alexander
4 **The Cane Man,** By Max Hunn
6 **A Summer Morning,** By Jack Fox
8 **Honing a Keen Edge,** By John Waters Jr.
10 **Native Aquariums,** By John Waters Jr.
14 **Natural Portraits—Nature Photographs To Enjoy**
18 **Moonlight and Hound Music,** By Bob "Greenie" Grewell
22 **Angling in the Pits,** By Larry Larsen
27 **Lake Talquin After the Drawdown,** By Mark A. Trainor
32 **Praising the Blue Crab,** By Frank Meyer
37 **Delicate Balance—American Oystercatcher,** By Susan Cerulean
38 **Wildlife in Art**
41 **FLORIDA WILDLIFE's Wood Duck Print Offer**

DEPARTMENTS

-44- **It's the Law**
-45- **Hunter Education News**
-46- **Conservation Update**

THE COVERS

You can own a quality print of this issue's cover art, an original by St. Petersburg wildlife artist Art Biro. Turn to page 41 to learn more about this special offer.

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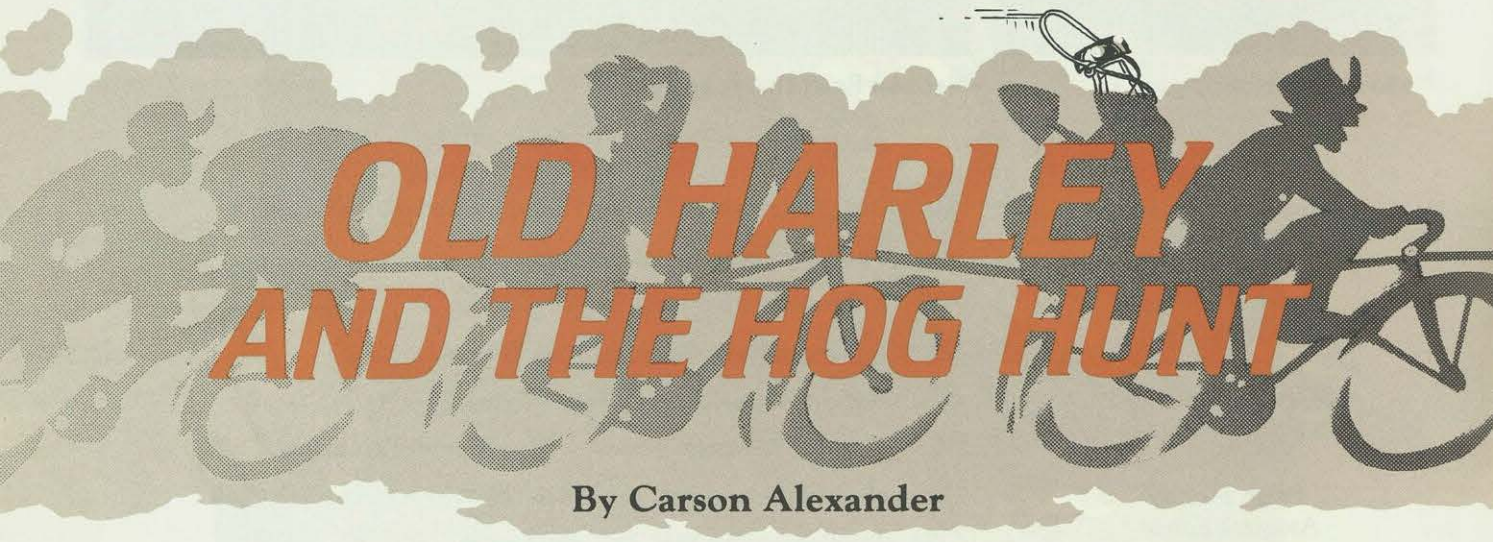
Publisher

FLORIDA WILDLIFE (ISSN 0015-4369) is published bimonthly by the Florida Game and Fresh Water Fish Commission, 620 South Meridian Street, Tallahassee, Florida 32301. Second-class postage paid at Tallahassee, Florida. Post Office Publication Number 202440. MATERIALS IN FLORIDA WILDLIFE include copyrighted materials which are property of individual contributors. Written permission to use the publisher's materials will be granted routinely by the editor for noncommercial, public informational purposes. MANUSCRIPTS AND PHOTOGRAPHS are received only with the understanding that the publisher assumes no responsibility for any loss or damages. Contributors should request "HOW TO SUBMIT" before sending materials. SUBSCRIPTION PRICES (sales tax included) are: $7 for one year (six issues); $14 for two years (12 issues) and $20 for three years (18 issues).



OLD HARLEY AND THE HOG HUNT

By Carson Alexander

While I was growing up near Tampa, about the same time I was suffering through my first teen-age infatuation, a very fortunate thing happened. A crazy friend of my father bought a secondhand motorcycle. We were in the depths of the Great Depression, and a purchase of this magnitude was *front-page news* in our neighborhood.

It was a venerable steed of World War I vintage, a rumbling loudness called Harley-Davidson, aged, but still containing in its perverse and crotchety steel heart a cheerful evil. Crazy Friend was certain he had the total answer to the Depression transportation problem when he stated that 15 cents worth of gasoline would run his mechanical marvel 60 miles!

There was only one small hitch; the statement was true *only if* it ran—which it would not when he needed it. When he did need it worst, like time for Crazy Friend to go to work, it wouldn't run. Never! Being late to work in the Depression era was not an acceptable thing. Once, you were in trouble. Twice, you were fired! Father's friend was fired. To say he was a bit enraged would be an honest summation.

The day he was fired Old Harley ran fine. In fact, it ran so fine that Friend was really trying it out, as he then had some time to spare. It happened he was speeding down one of the boom time roads in Temple Terrace leading to the Hillsborough River; however, Friend did not know that the boom had busted before a bridge was built on that fine road.

He and Old Harley parted company in mid-air while flying in a beautiful arc past the end of the road into the river. Old Harley settled comfortably to the bottom. Crazy Friend swam painfully ashore and trudged to our house, from where father took him to the nearest hospital for rest and rehabilitation. During the drive, father's friend let it be known rather vehemently that he and Old Harley had parted permanently. All salvage rights were open and he said that whoever pulled the thing out was the unfortunate owner!

I wanted that motorcycle. So did the rest of the River Gang, so we mounted a full-scale operation with 20 quickly gathered members. From 25 feet of water, we dragged Old Wet Harley out and up the bank, using a long rope with more hands pulling than you'd believe.

As I remember, all we did was pull out the spark plugs, drain the crankcase and gas tank, replace the motor oil and fuel and Old Harley was cranked on the second try, burbling cheerily. There was an inordinate amount of blue smoke for a while, and a tendency from then on to only run at full throttle, but nobody can have everything for free can they?

Immediately thereafter came the magnificant idea of going camping aboard Old Harley—or behind it, as we soon devised. You must remember that in those days, traffic was minute compared to now, and "out of town" was only six miles out, just past the Apex where Nebraska and Florida Avenues meet to the north of Sulphur Springs today.

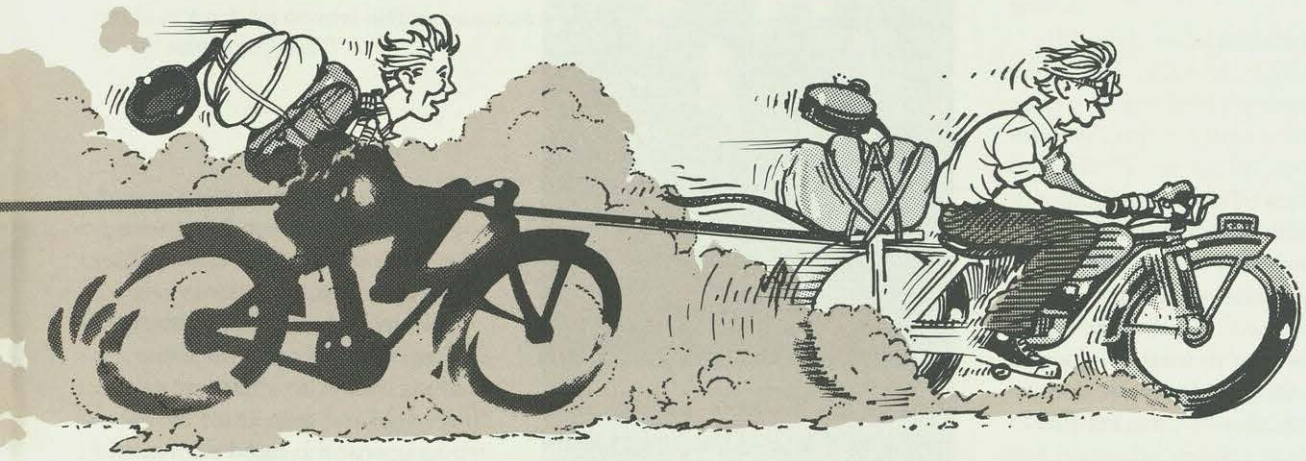
We planned to assemble at our fire circle by the Hillsborough River, with Old Harley, after pulling many bicycles (with camping gear tied thereon) in an astounding array and mass of dedicated young, enthusiastic sportsmen. Pioneers all!

Harley, with a long rope stretched behind, would dig off first. Unfortunately, due to the necessity to hurry a bit before stalling, a few neck-popping problems with the bicycle riding campers hanging to the rope were experienced. Some disasters are inevitable, but it was heartwarming to see scattered gear being assembled again as you swept around the block, with straining bicyclists racing to catch the rope. Charlie Watkins contended he was dragged through the spring by the fire circle so fast his bicycle wheels never touched bottom. It was our only case of someone "riding on water."

Sooner or later, we'd be strung out heading for the country. Out U.S. 41 north to the Apex, then onto Dairy Road. Dairy Road in those days was plain Florida sand. If it was dry, Old Harley had a tendency to be skittish in the turn, so you had to come in with authority—about 40 miles per hour. A 60 percent

casualty rate for the guys on bicycles at the turn was about normal and accepted. As the pilot of Old Harley, occasionally some of the groans the first night at camp bothered me, but we never lost a patient. That has to mean something toward my motorcycling skill, I think.

The following days of that summer would bring many wonders. The lake below the camp teemed with fish, snakes and alligators. The fish we caught and ate, the snakes we avoided if possible, and the 'gators we ignored as common trash. There were also rabbits, 'coons, 'possums, an occasional bobcat and feral pigs. Pigs and more pigs—wild, tough, and mean—real mean at the wrong time or place. The things I most clearly remember of the times we went there on Old Harley happened on the *Day of the Pigs*.



Jim Griffin was a "mover" in our small society, frail as a child, but who through sheer will power had built a tough, muscled body which exceeded any of us. His determination carried over into anything he did. Something drove him to excel and he easily carried the pack of us along.

Near the almost treeless lakeshore, a small herd of wild hogs—mostly shoats—was spotted and Jim decided to run one down for camp dinner. As usual, food was already in short supply. He set off like a young wolf and scooped up a succulent porker after a breathless race. As he did, out of the palmettos came the adults—mamas and papas with four-inch long tusks popping like ivory castanets. Mayhem minded, the big wild hogs headed after Jim.

He went up the only handy tree, a small cypress, getting about four feet above the ground before it began to lean over with a dozen chattering and squeeling mean hogs below. Very upset by the maniacal squeals, Jim clutched the young hog with determination.

Yelling from the hill, we offered him much good advice—mainly to "get rid of that sucker." He shook his head grimly, although a bit glassy-eyed by then. When the cypress began to bend lower, its roots pulling loose in the wet ground, he tossed the shoat into the herd. It ran squealing toward cover, and the herd followed noisily. Jim came up the slope like a mad, turpentined cat, vowing vengeance as he took quick glances over his shoulder. He hated to lose!

After polishing off the last of the pork and beans that evening, he recalled a book he'd read. Its remembered text was about hunting with a spear, the glorious details of standing off charges of wild beasts in big game hunter fashion—great stuff for late night fare around a campfire with the lonely cry of owls in the distance.

The following morning, inspired by the book, everyone lashed their knives to a stick. Great hunters all, we would chastise the grunting hogs, and in the process secure some solid food. Only 11 hunters went forth, as there were still a few cripples from the Dairy Road entrance, but they were with us in spirit in spite of a few snickers brought on by their sad state.

Early, we met the hogs along the lake. The moment we appeared, they attacked. At least, we thought they were attacking as there were more pigs than you ever saw in your natural life; all sizes running in more directions than you could see! If you've never seen 11 young big game hunters trying to climb up six small trees at the same time, you've never seen utter panic.

Number 11 was me, and I couldn't find a climbable tree anywhere. A fortunately tuskless sow found me flying in her direction of travel, and helpfully tried to boost me into the next county for several strides.

Come nightfall back in camp, I had black on blue overlaid by black on blue. Great was the boasting of deeds done, while I groaned among the wounded, thinking terrible, vengeful thoughts; not at the hogs, but against my erstwhile friends.

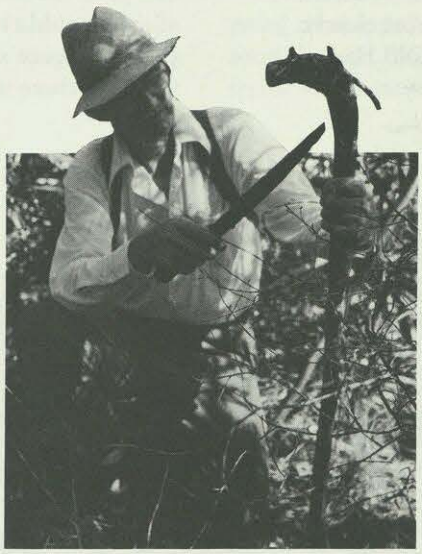
Fortunately, before a terrible second try to kill all the hogs, even the grits ran out and it was time to return home for a decent meal. Old Harley gave me back my pride, cranking on the first stroke.

I rode carefully, a Proud Hunter returning, standing up all the way as the long line of bicyclists clutched the tow line.

THE CANE MAN

Stadel Charon Carves Unique Walking Canes

Text and Photographs
By Max Hunn



Charon first finds a suitable tree, with a good root at the correct angle for the handle, then harvests the wood. It may take from a month to a year to cure the wood.

In this era of mass production of look-alike items, hand-carved walking canes are unusual. Such canes are neither widely produced nor widely used, and they do not lend themselves to mass production methods. Original art never does.

However, there's a market for such original walking canes, as Stadel Charon of Inverness has discovered, and today he's developing a modest business creating original, hand-carved canes with unusual handles from a variety of woods—specifically the roots of various trees. He has carved walking canes with handles shaped like horses, dogs, birds, snakes, alligators and pigs. One hog farmer ordered six such canes as Christmas gifts for friends.

No two of Charon's canes are exactly alike. Basically, each shape depends upon the artistry of nature to which Charon adds the final touches with his expert carving, mainly done with a pocket knife. It's not just ordinary whittling. He also uses small gouges as necessary.

Producing hand-carved walking canes is not as simple as it might appear. Charon's canes are one-piece affairs, and obtaining the wood is the number one problem and a time-consuming one. It's not a case of visiting the nearest lumber yard. Instead, he prowls the woods, where he has the owner's permission, looking for suitable saplings with trunks small enough for the main shaft and with a major root growing at an angle of 75 to 90 degrees from the main trunk. Upon locating a suitable sapling, he digs to determine if the root angle is proper. If it is, he cuts it a few inches from the main trunk, and after trimming the branches, has rough material for a cane.

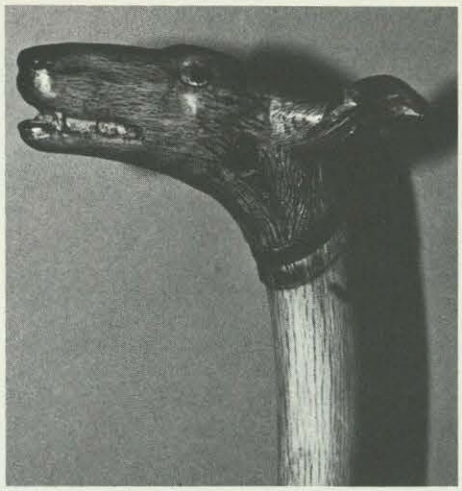
If the tree's root system lacks the proper angle for the handle, Charon covers the roots with the soil he removed and begins his hunt anew. Every sapling isn't necessarily a potential walking cane.

He has successfully carved canes from a variety of woods; including live, turkey, laurel and other oaks; dwarf sumac; persimmon and Carolina ash. Basically, he can use any tree having the proper size and shape and having wood that will cure without splitting. Curing is a vital part of his operation.

Within 24 hours after cutting a sapling, Charon coats the future walking cane with a mixture of linseed oil and turpentine to seal the wood against too rapid drying, and as protection against wood-boring insects. Then he allows the wood to cure by air drying it under cover.

The curing process is a matter of timing. How long it takes for the

He does most of his carving by hand, using a pocket knife. However, he also uses small gouges when needed. This is no ordinary whittling.



No two of Charon's walking canes are alike. Depending on the shape of the wood, and his artistic inspiration, he may carve one subject or another. He tends to work on several different canes at a time, so he "doesn't become tired of any single project."

wood to cure depends upon the type of tree. Some woods cure rapidly, while others cure slowly. By trial and error, Charon has learned the approximate curing time for each wood he uses. Average curing time is six months, although some woods are ready after a month. However, he's found he cannot allow the bark to remain on the wood longer than eight weeks because if the bark is left on too long, wood borers become a problem. If the bark is removed too quickly, the wood often checks and cracks. It's then firewood rather than artistic material.

Once the wood is cured, he roughs out the shape of the handle with a band saw, strips off any remaining bark then begins his delicate carving. How long does it take? Charon has no idea, for he never works on one cane continuously until completed. Instead, he carves on one cane for a short time, then turns his attention to another, then to a third. In this way, he doesn't become tired of any single project, and he retains his feel for the special character of each one.

Once the carving is completed, he seldom uses paint for decoration unless it's necessary to indicate the eye of an animal or a bird. He prefers to leave the finished walking stick a natural color. If he does want

He carved six canes for a farmer who gave them away as Christmas gifts one year.

to darken the wood, he burns it lightly with a propane torch or sometimes a plumber's torch. Of course, the burning has to be skillfully done or he ends up with a charred mess.

The last step is applying the final finish, consisting of three to seven coats of tung oil, hand rubbed onto the wood. Hardwoods require fewer coats than more absorbent soft woods. The number of coats depends upon the wood and the desired final finish.

Charon learned to use the tung oil by trial and error. He tried varnish at first, but had problems with it blistering. He found shellac was also a problem. Finally, he elected the tung oil treatment. The tung oil finish can be maintained with lemon wood furniture polish.

Cane man Charon's carving ability is a natural skill. He's self taught. Except for six months attendance at a small art school in Coronado, California, Charon has had no formal art training. However, his working career has centered around wood. Born in Vermont, he has worked as a tree surgeon and as a marine carpenter specializing in wooden boats. Years ago, he and his father specialized in repairing wooden, harness-racing sulkies.

Although wood has always been a major part of his life, Charon admits he got into the custom-made walking cane business accidentally in 1976. "I was foolin' around with this root that crudely resembled a horse's head, and suddenly, I realized I was holding a potential walking cane with a horse's head for a handle."

Thus, Charon began creating hand-carved walking sticks, not exactly an over-crowded business in this mass production age, but certainly an unusual one.

Charon started carving his style of walking canes when he studied a "root that crudely resembled a horse's head."

A SUMMER MORNING

By Jack Fox

Last night's cooling, humidifying summer rain still lingers in jeweled droplets on the trees and freshly spun webs of now invisible spiders. A bobwhite whistles from the nearby field, calling cheerfully to its mate. In July, the little ones that have survived the perils of the wild are feathered and flying with their coveys.

From the edge of the small pond at the bottom of a gently sloping hill, the authoritative *keeee-aaaaarrrrrrr* of a noble red-tailed hawk pierces the morning stillness. From its perch atop a long dead water oak, it watches for the scurry of a field mouse. A moment after the hawk's call, two delicate snowy egrets gently glide from the cloudless sky, spreading their satin wings in a graceful flare as they circle the little grass-filled pond before settling near the edge.

The egrets patiently stalk the hundreds of small frogs that are now hiding in the maidencane, but last night were singing loud harmonious choruses in celebration of the rain. Some of them now fall prey to the quick jabs of the egrets' sharp spear-like beaks, yet their species will survive the onslaught because their sticky clusters of fertile eggs lie safely in the dark water, where they were laid as raindrops dimpled the surface.

Silently, the hawk swoops down over the glassy water to sink its sharp talons into a mouse near the edge, flushing away the egrets. Again, white satin wings flash in the morning sun. The hawk spreads its wings in a protective mantle over the mouse, then plucks it from the ground and swallows it quickly.

In a small tree a few yards away, a mockingbird sings a dozen melodies, some mournful, others cheerful. And in hiding places high in the treetops, a multitude of locusts buzz in unison. The leader can be heard as it chirps the beginning notes which quickly call forth a series of sounds from the others. Their songs are a sure sign of summer.

The greenery is lush and thick around the little pond. The growth includes red maple, bay, oak, hickory and holly. Trees beautify this place with their seasonal changes from winter bareness to springtime blossoms and the fruits of summer. Fall will be colorful with the shades of gold, amber, crimson and brown. Medicinal and poisonous plants also grow around the pond and in the field. They silently keep their secrets from modern man, nevertheless, they were known and trusted by the ancient tribes who once lived here and finally disappeared from the site forever.

The early humans left plenty of signs of their presence, and bits of wood-fired pottery and flint tools turn up in the garden whenever the soil is worked to be planted. At the edge of the garden grows an American plum, perhaps a descendant of trees harvested by the ancients. Brightly colored red and yellow plums glow in the morning light, decorating the little tree's twisted, thorny branches. An

apple tree is not far from the plum, but is now almost fruitless. The red-blushed yellow fruits have been eaten by white-tailed deer which come to visit in the dark hours of morning and on moonlit nights. Not far from the fruit trees grows a grape arbor. The clusters of small grapes will swell today as the woody stems and roots of the tangled vines soak up the rain which dampened the earth.

Last night, the lifeless limb of a giant, centuries-old live oak fell to the ground when the rain saturated the soft, bromeliad-covered wood. As the limb gave way from its final hold on the tree, it carried the bromeliads with it to the ground. They are in flower, but the bloom is so subtle and their growth so inconspicuous that both limb and air plants could easily be unseen lying among the browns of fallen leaves and whispers of Spanish moss were it not for a yellow swallowtail perched on one end of the limb. The newly emerged butterfly slowly pumps fluids into its unfolding wings as it dries in the morning rays of sunshine, preparing for its first flight. By mid-morning, it will be feeding on the sweet nectar of wildflowers.

Another yellow swallowtail is already flying, making erratic dives and climbs in the humid air. It comes to rest for a moment on a shrub, then continues onward across the field. As it flutters over the rock pile, a juvenile gray squirrel clambers up the heap, scaring away the great bluelined skink that was sunning itself in a small spot of sunlight that had filtered through the trees onto the rocks. The skink scurries into a crevice between the rocks, where in the damp darkness, black widow spiders dwell. The spiders and the lizards share the habitat there.

The local pair of American kestrels take turns catching big, juicy lubber grasshoppers in the field as the sun illuminates its soft greens of grasses and subtle pastels of little flowers. They eat some, but fly others to their fledging nestlings in the abandoned pileated woodpecker hole in the sentinel pine that lightning struck and killed one July night several years ago. The slate blue-gray of the male compliments the mottled rusty brown of the female as they alternately hover and dive swiftly at the insects.

There is a marvelous diversity of life here—a blend of past and present, domestic and wild, new, old, quick, slow, Earth and man. Life begins and ends here, and this has been going on for an unimaginable span of time. The rocks bear silent witness to the sea once swelling here, for they are formed of the shells of sea animals, and the pond is a collection of rain drops. The flora and fauna of this place in the country has always been here, but has always changed. I cannot help but wonder, as Florida's human population climbs to 12 million, what changes are yet to be seen.

HONING A

By John Waters Jr.

The most common tool used by those who venture outdoors to hunt, fish, camp or hike is probably the knife. Although our choices of styles, sizes, brands and colors is greater today, the knife we carry is still basically a handle and blade. Although handles tend to wear very little, blades become dulled with use, and when they need to be sharpened, there is a right way to do it.

Some knives are easy to sharpen because their blades are made of relatively softer steel than others. Knives used by cutlers are usually made of soft steels that dull quickly, but also sharpen quickly. Cutlers' knives are frequently rather plain in design, without cases and not generally thought of as "sporting knives"; however, they are among the most useful knives to have around for processing game and fish.

Sporting knives are available in a variety of blade steels, and modern alloys, such as 440 stainless steel, are very popular because of their beauty and resistance to corrosion. Softer, nonstainless steel blades will rust, and if not kept properly, can soon become ugly and dull. Stainless, on the other hand, is a beautiful material, but very hard for most people to sharpen properly.

Sharpening technique is a skill that can only be learned with practice, but it tends to be easy when the correct techniques and sharpening tools are used. Depending on what metals a knife blade is made from, its condition and intended use, tools and techniques for sharpening will vary.

A general purpose list of sharpening tools for sporting knives includes a black whetstone, soft Arkansas stone, hard Arkansas stone and a steel. For restoration of knife edges that have been "worn out," are rusted or improperly sharpened previously, the list can also include emory cloth, files and a belt sander. No matter which sharpening tool is used, however, the most important part of the technique is keeping the blade at the correct angle to the sharpening surface. Failure to hold the blade against the stone or steel at the correct angle, which for most blades is close to 20 degrees, is the most common reason knives that have been "sharpened" still won't cut.

Next to failure to maintain the 20-degree angle, improper direction of the blade against the stone or steel can be responsible for poor sharpening technique. Generally, the correct direction of sharpening is from the handle end of the blade towards the point—as if you were shaving the stone. Although many people use a circular motion to sharpen small pocket knives, this is a poor technique for longer blades, and not the best for small knives.

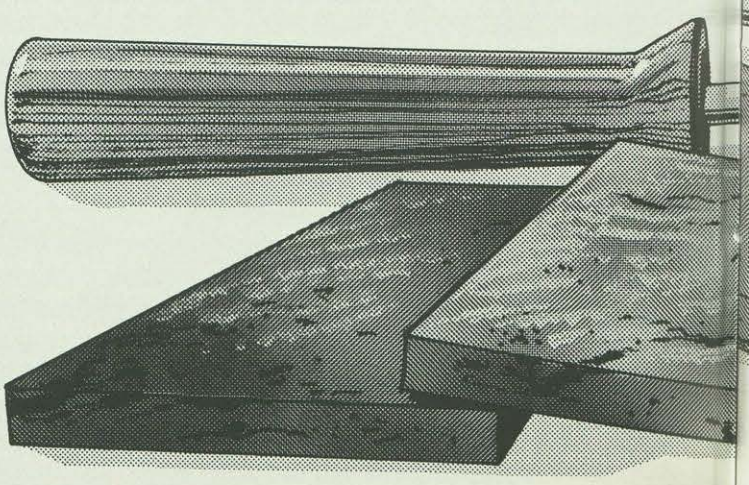
Oil is absolutely necessary for stones because it carries away the small particles of metal removed from the blade when it is sharpened against the stone. A honing oil is recommended, but light machine oil will do. The stone should be kept well oiled during the entire sharpening operation.

There is quite a bit of difference between various grades of black whetstones. Some are rather coarse, while others are relatively fine. Often you will find a combination stone with a slab of coarse material on one side and a finer material on the other. Generally, the coarse whetstone should not be used on finer knives, as it will scratch deeply, and if you miss your 20-degree angle, this can ruin the appearance of the whole blade. For this reason, you should use the coarse stone only for knives that really need the extra cutting power it provides.

If you have an out-of-shape knife that is worth keeping, but needs complete reshaping and sharpening, a belt sander and flat file can do the job. However, using a belt sander to sharpen a knife can be extremely dangerous. For this reason, certain safety rules must be absolutely followed:

- Mount the sander securely in a vice and be sure the air cooling vents are not blocked. The belt must be oriented to run away from you. Use a grit of 120 or finer.
- Wear a full facial safety mask, and preferably a heavy apron. Beware of loose clothing such as shirt sleeves that could catch in the running sander and cause injury. Heavy gloves are also advisable.
- Work only in good light, and grind the blade slowly to avoid overheating it. Not only can an overheated blade blister your fingers, but heat also destroys the temper in the blade. Keep a container of water handy for cooling, but dry the blade before resuming work.
- Be sure your mind is on the job at hand and that you are not under the influence of substances that may impair your concentration or coordination. Work alone and never when you are tired.

The technique of using the sander is to move the



KEEN EDGE

blade across the belt as you maintain it at the correct angle and move it in a "cutting direction." Work slowly and carefully to alternately shape the edge on both sides. Change sides frequently, and do not press the blade against the belt—just let it contact the belt enough to remove the metal slowly.

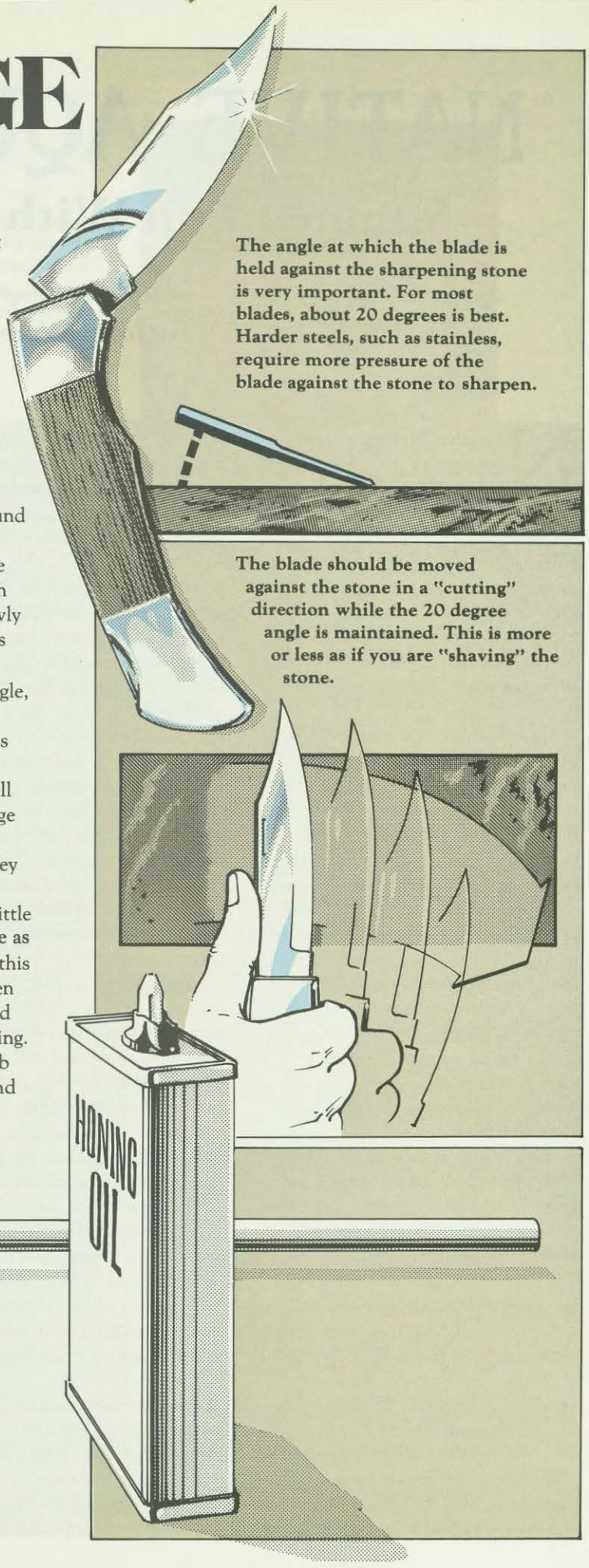
After shaping on the sander, the knife can be mounted in the vice and flat filed to smooth off and finish up the point and edge. For knives not needing major reshaping, you can begin restoration with this step. Before locking the knife in the jaws of the vice, wrap a heavy layer of duct tape or masking tape around the handle to protect it.

The basic filing technique is, again, to maintain the correct sharpening angle. As with sanding, work both sides to shape the edge symmetrically, and work slowly in long, flat strokes. Safety is also a must here, as it is easy to slip and run your hand into the cutting edge.

For the better knife, which has not lost its edge angle, you can begin with a fine black whetstone, then graduate to a soft Arkansas stone. The hard Arkansas stone will be needed for the harder steels, and a fair amount of pressure on the blade against the stone will be necessary to sharpen it. The final finish on the edge of most knives can be done with a steel. Two major kinds are generally available—metal and ceramic. They both do the job.

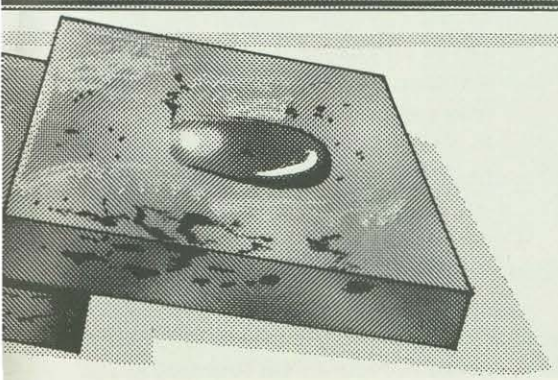
To use a steel, maintain the 20-degree angle, or a little more, and sharpen in the cutting direction—the same as for the stone work. Work both sides alternately. At this point, your cutting edge should be honed up to a keen sharpness, so do be careful! Always keep the steel and knife at a safe distance from your face when sharpening.

A properly sharpened knife can really make the job of fileting a fish or skinning a deer so much easier, and safer too!



The angle at which the blade is held against the sharpening stone is very important. For most blades, about 20 degrees is best. Harder steels, such as stainless, require more pressure of the blade against the stone to sharpen.

The blade should be moved against the stone in a "cutting" direction while the 20 degree angle is maintained. This is more or less as if you are "shaving" the stone.



NATIVE AQUARIUMS

Summer Fun With Local Ecology

Text and Photographs
By John Waters Jr.

Now that Florida's long, hot summers are here and schoolchildren are on vacation from their usual studies in mathematics, English and the sciences, it's a good time to begin or improve a home aquarium. The kind of "fish tank" children will most remember and learn from will be one in which the small fish were caught at a local stream, pond or lake.

Many of Florida's freshwater fish can be taken for personal ornamental use. Although the nongame category includes a number of endangered and threatened species which are fully protected, there are many minnows, shiners, sunfishes and other small fish which can be caught and carried home to enjoy. Many of these rival the beauty of the exotic species usually offered in commercial aquarium shops.

The dollar sunfish (*Lepomis marginatus*), a small game fish, is widely distributed in Florida, and does well in an aquarium. It is usually common to very abundant and grows to about three inches long. Turquoise blue markings color the head, and during the spawning season, the males turn almost black. They are very active in a tank, but are also rather aggressive and will eat almost anything that moves and is smaller than themselves.

About 10 years ago, when my family was starting our first 20-gallon aquarium, one of the children caught a dollar sunfish while bream fishing in a sandy-bottomed, 20-acre lake in eastern Alachua County. Prior to then, the children had shown an interest in smaller tanks and pet store varieties of tropical fish, but the larger tank and field trip to stock it with native species was much more interesting to them.

Although we netted a few sailfin mollies, darters, mosquito fish and shiners, the two-inch long female dollar sunfish caught on a line became the prize of that field trip. It lived in the tank for eight years, and became so accustomed to us that it would eat from our fingers. In the eighth year, the female and a more recently caught male spawned in the tank and they hatched three batches of eggs over a period of several weeks. It was interesting to see that the male guarded the eggs and the tiny, almost transparent fry for a short time after they hatched.

Much can be learned from a home aquarium. Children have opportunities to observe firsthand how fish swim, feed and behave toward other fish and prey. It also teaches them the responsibility of caring for living things and facts about a balanced aquatic ecosystem. For the family members who really want to learn more about fish and other aquatic species, the project can involve reading and research in local libraries to learn to identify and care for different forms of freshwater life. The home aquarium can be so much more than just a "fish tank."

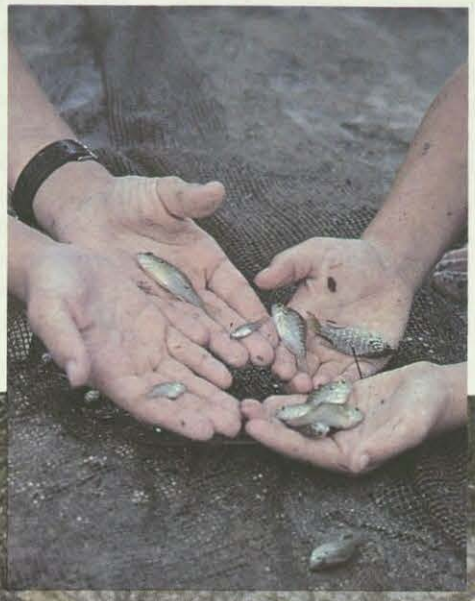
There are some basics that must be followed for success, however. First, a tank of at least 10-gallon volume is recommended, although smaller tanks and bowls can be used for a few of the smallest fish. The second item needed is an air pump, with a line and airstone or filter apparatus. The filter is preferred as it helps keep the water in the tank clear, as well as acts as a "biological filter" which helps break down waste products. An under-gravel type of filter is the best. A bottom layer of clean, coarse sand or gravel is also recommended.

The tank water should be allowed to stand for a few days, with the air pump and filter running, before placing fish in it. However, if your water is from a chlorine-free source, such as a private well or a clean natural source such as a stream, you can use this water as soon as it is placed in the tank. Also, pet shops sell dechlorination chemicals which can be used.

A food supply should also be on hand, before you catch your fish, and it is hard to beat the convenience and suitability of the packaged fish foods available from pet stores. Dollar sunfish will do very well on a main diet of small freeze-dried shrimp with occasional supplements of a balanced flake-type food.

For field collecting, you will need at least one bucket, preferably having a five-gallon capacity. This can be purchased at a paint supply store for a small price, or you may have something equivalent on hand to do the job of holding your freshly caught fish and water. You will also need a minnow seine, cast net or dip net.

For collecting minnows of nongame fish (excluding catfish), Florida law allows you to use a dip net of not more than four feet in ▷

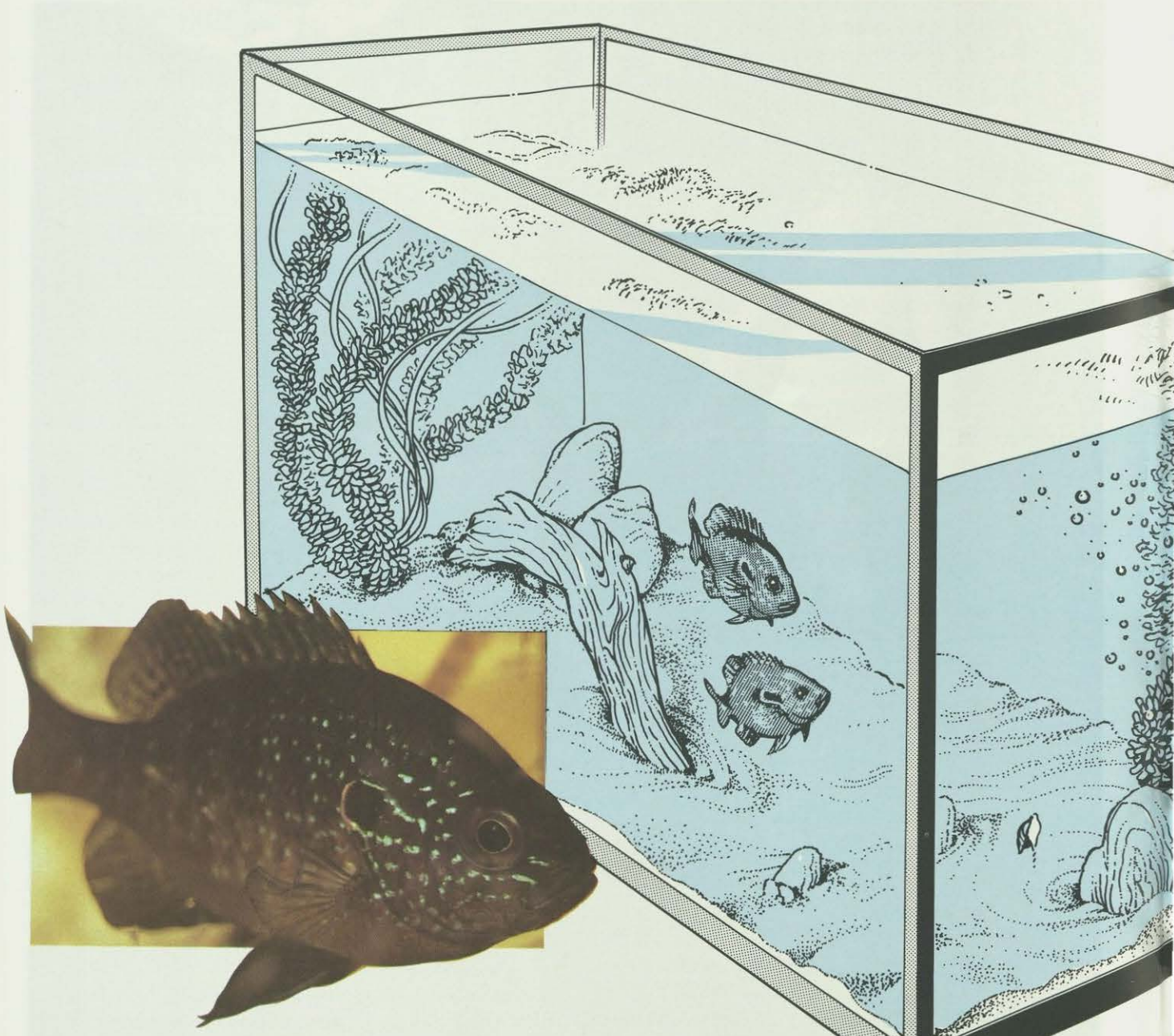


A seine of not more than eight feet long and having a stretched mesh of no more than one inch may be used to capture minnows of nongame fish in Florida, but all game fish species must be immediately released back into the water. Game fish need to be handled gently when released.

diameter; a minnow seine not more than eight feet long and having a stretched mesh of no more than one inch; or a cast net having a stretched mesh of no more than one inch. Small game fish may be taken, but only with conventional sport fishing equipment such as pole and line. Any game fish taken while seining or netting for nongame minnows must be immediately released. A good way to catch small sunfish for the aquarium is to use a small hook with the barb removed or to simply tie a bait such as a small piece of earthworm to the line only. When the fish grabs the bait, quickly snatch it onto the bank.

A Freshwater Fishing License Stamp is required for all persons ages 16 to 65. Persons 65 years of age or more are required to have a Permanent Hunting and Fishing Certificate, which will be issued free to Florida residents by county tax collectors' offices. Free certificates are also available to disabled persons.

Field trips close to home will be the most successful, as the captured specimens will be under the stress of transport for a shorter time. Use of a battery-powered areator, of the kind designed to keep live bait, is a desirable addition to your equipment list, but not absolutely required. What is definitely needed, however, is for the water in which you will be transporting fish home



Small game fish, such as the dollar sunfish, may be taken for keeping in an aquarium, but only by conventional sport fishing methods such as pole and line. You can avoid injury to these little fish by using only a piece of bait on the line, or a small hook which has its barb removed. See the text for license requirements to take both game and nongame fish in Florida.

If conditions are right in the aquarium, fish may spawn and hatch fry. These are newly hatched dollar sunfish, and the male was close by, protecting them even from the female that laid the eggs.

to be as fresh and clean as possible, from the same source as the fish. And, the most important thing to remember is to take only a few specimens. One bucket of water can hold only a few fish for a short time before all the dissolved oxygen will be used up. A general guide is to carry no more than ten one-inch-long fish; however, they will stand a much better chance of making it home if you carry only half that many.

During the journey from catching to placing your fish in the tank, you can help keep the water oxygenated by having someone frequently bail the water out and back into the bucket so that the water surface keeps getting areated. An alternate method is to use a hand-operated bicycle pump to bubble air into the water. The bailing technique, however, is much better for water that is warm, as it helps cool the water and allows it to hold more oxygen.

Getting the fish home is phase one of the critical operations. Getting them out of the collection bucket into the tank is the second phase, and it is easy to lose the fish at this point if there is more than a few degrees of temperature difference between the water in the bucket and the water in the tank. Placing your hands in both the bucket and the tank at the same time can indicate a significant difference, or you can use a thermometer. When a difference of more than five degrees exists, as may be the case if you catch your little fish in a warm lake then carry them to an air-conditioned home, you will need to let the water in the bucket adjust to room temperature. This will take a few hours. In any event, place the air line from the aquarium air pump into the water in the bucket as soon as you get home.

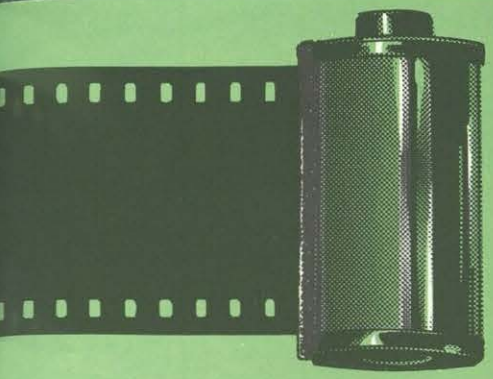
Once the temperature is balanced, the wild caught fish can safely be placed in the tank. Afterwards, you should check periodically for specimens that don't make it and remove them immediately. Wait until the second day to begin feeding, and then never feed them more than they will consume in about five minutes. Excess food will decay and cause problems in the tank's water quality.

Although our small native fishes make interesting pets, there are other kinds of creatures that can be kept in the home aquarium. Freshwater species of crayfish, grass shrimp and snails add variety. However, crayfish will tear up any aquatic plants you place in the tank, as well as endanger the fish. They are also cannabilistic and generally messy, so only two or three small ones are recommended. Grass shrimp will soon be eaten by dollar sunfish, and for this reason, make an excellent natural food if they are conveniently available to home. Snails should be smaller than a dime, preferably, and number not more than half a dozen in a 20-gallon tank. Although the large "apple snails" can be of great interest, they tend to foul the water and should not be kept for long.

If you add vegetation, the aquarium will need either an electric light source nearby or enough window light for the plants to grow. Native, rooted, grassy vegetation types are preferred. Many aquarium plants sold in pet stores in the United States are collected from Florida's clear streams and rivers. Some of the ones more commonly collected and sold are elodea (*Elodea canadensis*) and banana waterlily (*Nymphaea mexicana*). Plants help balance the dissolved oxygen and carbon dioxide levels in the water because they use the carbon dioxide produced by the animals and replace it with oxygen. However, with adequate aeration, they are not necessary.

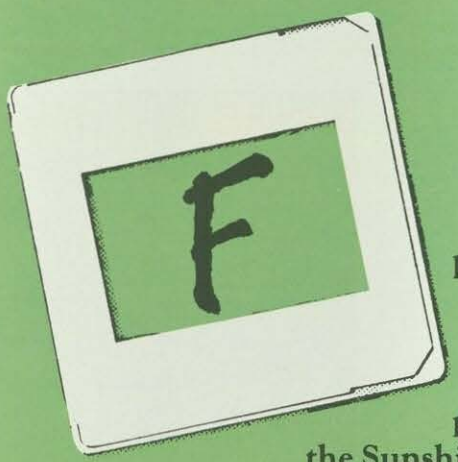
By following these simple guidelines, and taking the opportunity to visit one of Florida's many freshwater areas, you can have an aquarium that not only will provide hours of fun in the building stages, but also be something that can be added to or changed later on. The biggest bonus, however, is while having all this fun, children can learn a lot—and it gives them something new to do!

Natural Portraits



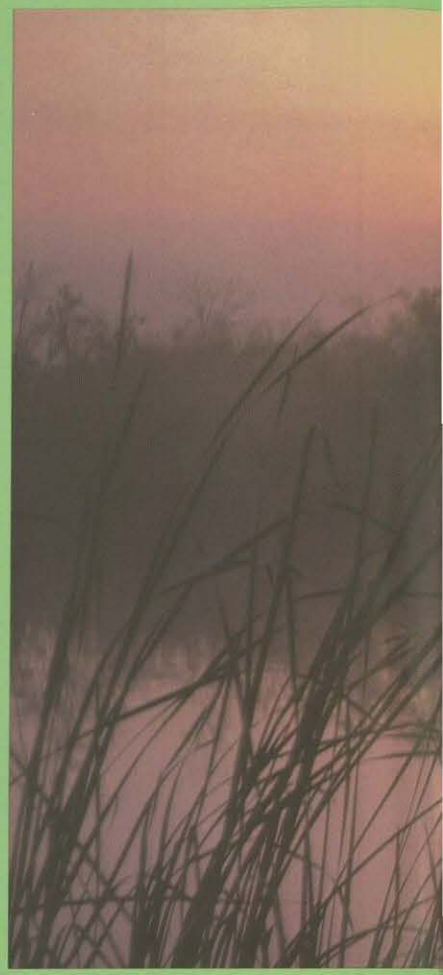
Jennifer L. Hart -Photograph

Thomas E. Liddle -Photograph



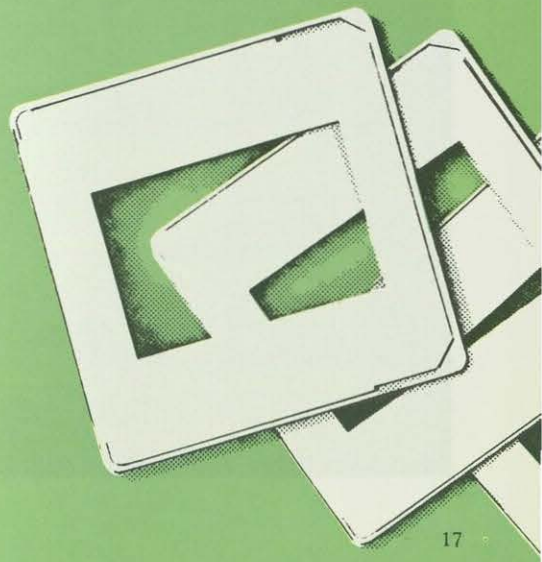
Florida has no closed season for nature photography, and thousands of photographers in the Sunshine State enjoy the challenge of trying to capture living things on film. The examples here were taken by members of Tallahassee's Capital City Camera Club.

Keith Cruce-Photograph



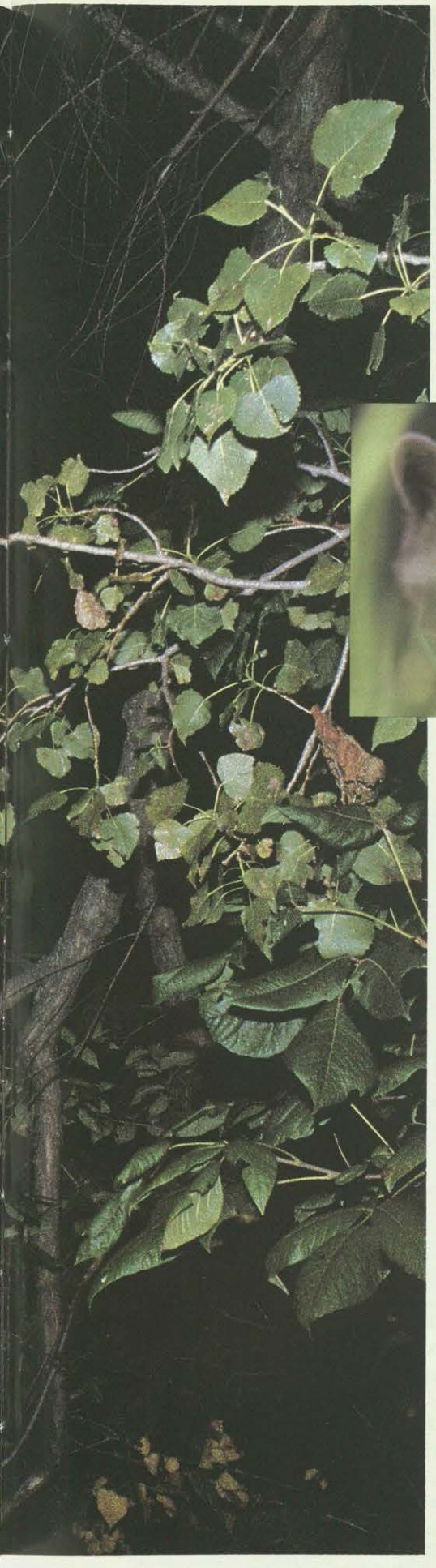
Thomas E. Liddle-Photograph

Thomas E. Liddle-Photograph



Moonlight and Hound Music

Text and Photographs
By Bob "Greenie" Grewell



Of all the outdoor hunting sports we can enjoy in Florida, 'coon hunting with a hound has to be the most underrated. This exciting, challenging, rewarding form of night hunting can nonchalantly seep into your blood. Spending a night hunting with a hound or two of your choice along a silent, wooded stretch of creek, chasing the elusive raccoon until it scales a tree, makes it easy to understand how 'coon hunting stands apart from all other forms of hunting.

There are hundreds of potential 'coon hunters everywhere who never venture into the ranks of the sport simply because they have never hunted raccoon, don't have acquaintances who hunt raccoon with dogs or are hesitant because they don't know the basics of the sport.

This sport actually revolves around the hound and the raccoon. The hunter is only a spectator, enjoying nature during her solemn darkness and audibly sorting out the hounds' baying voices as they follow a prowling raccoon's erratic but distinctive scent trail. If nothing else inspires you about this sport, the mere fact that a hound and a raccoon running at a fast pace can accurately move through the density of the woods and underbrush at night appears to be a feat in itself. Even though the hunter carries a light, he sometimes still has a difficult time negotiating the volleying terrain.

Your job as a 'coon hunter is to handle and care for your dog. When you hit the woods, the dog will do the hard work of locating and running the raccoon. It will find a scent trail, follow it through the blackened environment, and most often, the raccoon will climb a tree, enter a hole or field tile or just plain disappear. The hound's voice tones will change from an extended baying bawl while on the initial scent trail to a series of short, choppy barks when it determines the tree it believes the raccoon has climbed.

Before you ever attempt to go to the woods, you will need to understand the importance of the hound and decide if you want a dog whose voice will be silent, semisilent, or open. Your decision will be influenced by the geographic contour and the scope of ▷

the terrain you plan to hunt, and will depend upon what you personally desire from a hunt.

A silent hound is one that when it's been dropped off in the hunting zone won't make a bark or bawl while it's searching for or following a scent trail. When it locates the tree the raccoon has climbed, it will only then begin to bark "treed." The advantage of this type of hound would be when you're spot hunting, or hunting small patches of woods on the perimeter of populated areas, the canine noise will be minimal because your hound only barks when it trees. The disadvantage is if the dog isn't a close-range hunter and travels far in search of an active 'coon, you might not hear when it barks "treed." If you hunt in hilly terrain, it could be treeing only one or two hollows away from you, and you wouldn't be able to hear it. A silent-voiced hound is not a faulty dog just because it doesn't bark on the track, and it can be an excellent hunter if this style of dog meets your needs. It all depends on what suits you.

A semisilent-voiced hound barks only at intervals on the scent trail. It might give a sharp "strike" bark at the location of a hot track and not bark again for three or four minutes. This characteristic in a dog keeps the vocal communication in the woods down to a minimum, but still gives you a general idea of where your hound is taking the track. The semisilent dog keeps you abreast of its location without a lot of barking.

The open-voiced hound is all the beautiful baying music the dog can expel from its lungs from the time it picks up a track until it pushes its front feet against the trunk of a tree. Throughout the entire scent race, the hound bays in different intensities of tone, enabling you to imagine where the raccoon has been, where it's headed, how hot the track is and how well the hound is doing at unraveling the scent trail. This is what 'coon hunting is all about: a few hunters gathering together on a dark, damp night, turning their experienced hounds loose at the edge of a wooded creekside. One hound strikes a hot track and the others join in the language of the hound as you listen intently while the excitement in their voices intensifies into a yodeling chop, then a sharp chop that indicates "treed." To the avid 'coon hunter this is the foundation of the sport.

If you purchase a pup, you'll gain more enjoyment from the sport by watching it grow into a successful hunter. But you'll have to remember, training a hound puppy takes time and personal sacrifice. If you choose to train a pup, hunt it with an older hound that knows the game and your pup will pick up the desired hunting traits easier.

If you buy a started dog, you'll pay more money, but you will also have a more than even chance of obtaining a dog that will succeed. It will already have the basic instinct of what's expected of it, which will coincide with it's heredity and natural abilities.

For a finished hunting dog that's already been trained and will run and tree its own 'coon, you'll pay top dollar. But, you will have a dog that can hunt at will, and do so in a successful manner. You have to determine your own level of knowledge, abilities, time schedule and financial status in order to decide which will be best for you.

This mostly nighttime hunting sport has been underrated for far too long, probably because of the lack of knowledge and understanding of its basics. And because too many people feel the average 'coon hunter shoots every 'coon he trees, but that's really a total misconception!

There are nights when the hounds beat the earth's surface for over an hour, and after the raccoon uses all its tricks, it bellies up a large tree. Then, instead of shooting the raccoon, most 'coon hunters leave it alive, and simply reward the hounds with a few expressive pats on their rib cages and with kind words, leaving the 'coon to run again another night.

This tough breed of nocturnal sportsman would rather roam the still darkness of a damp, cold night than to lounge around the house. The 'coon hunter seems to be besieged with a constant desire to tramp through sucking wet mud, six-foot-high cornstalks and briars as thick as a crowd at the state fair, just to hear the baying of an open-mouthed hound. These hunters aren't really crazy, though. They are just obsessed with a deep love of nature, hound music and the strange romantic effect that darkness has on the hunter. When they are in the woods after dark, they are the voices of the night.

ANGLING IN THE

Man-made waters such as mined and borrow pits are abundant in many areas of Florida, yet they receive little attention. Irrigation canals, borrow pits dug for highway construction and even small reservoirs frequently provide great shallow-water bass fishing. An angler can often double his catch rate in such waters and bass seem to grow faster and chunkier in some of them.

Most of these waters are overlooked, and they can appear ugly yet be full of largemouth bass. I like to fish places like these due to the general lack of angling pressure. I've often found hungry fish and, if I were keeping them, a quick limit.

Most pits have an irregular shoreline. Waters are of medium clarity, but occasionally, a pit can be found with fairly clear water. Many have rocks, sand, and gravel outcroppings along their bottoms. Lightweight rigs are particularly suited for the pits—which seldom have launch ramps—and a trolling motor is generally sufficient to maneuver.

Bass quickly become adapted to unique pit structures. Brush structure is usually abundant along the bottom, and ordinarily, vegetation grows profusely before a pit is flooded. Once inundated by water, the vegetation provides excellent habitat and cover for the entire food chain, from phytoplankton to largemouth bass.

Lunker anglers concentrate on this vegetated terrain to harvest big bass. Many pits in the South have produced bass more than 14 pounds, but seldom does the word get out as to which pit produced the lunker. The lucky anglers are usually pretty tight-lipped about that.

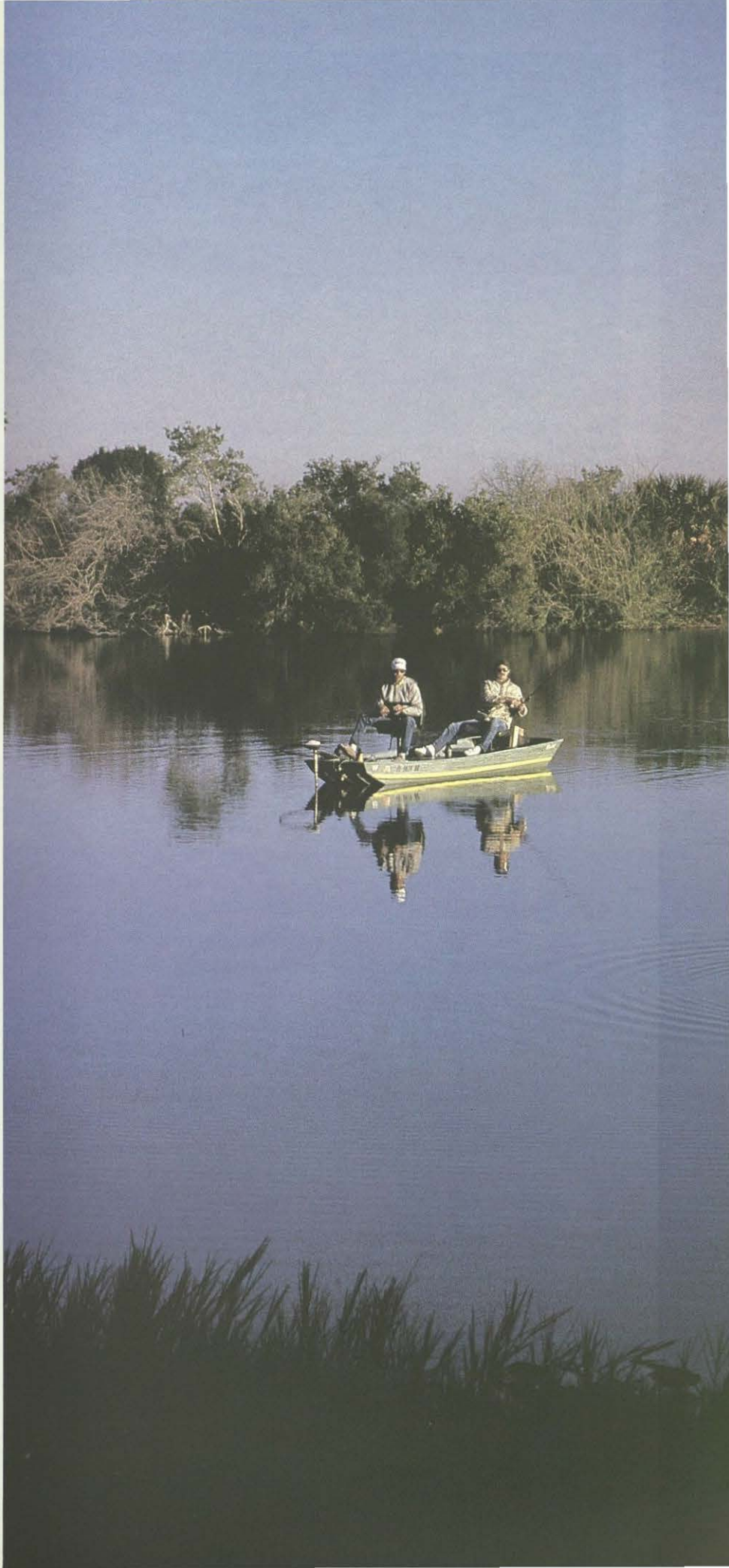
Most pits are a product of a mining operation and, even though habitat and species diversity is lacking, the pits can provide good habitat for bass after they have been dug. In Florida, for example, most of the fabulous phosphate pit fishing occurs in Polk County, which lies between Tampa and Orlando. Many pits also exist throughout other states around the country.

Structure Galore

When huge dragline buckets are digging through soil to get to the rock or other products beneath, they often create dead-end channels and islands, as well as a multitude of structure and depth changes. The massive mining buckets, in a single scoop of earth, can leave a hole large enough to hold a three-bedroom house. The depth of these waters varies from site to site, but our focus is on the shallows.

Text and Photographs
By Larry Larsen

PITS



When mining operations cease, the holes usually fill with water. Its clarity will vary, depending on shoreline characteristics, the surrounding drainage land and the degree of man-made water manipulation, if any. The lakes or ponds that remain contain underwater humps and other projections which often rise above the water surface.

Florida pits usually vary from a couple of acres up to 500 acres or so. All of the pits have different structure present. Some have vast lily pad beds, others have cattails and bullrushes, and still others are nearly devoid of emergent vegetation. Some of the better pits even have a profuse growth of hydrilla. Many have sharp dropoffs near some of their bank area, while ▷

other pits have small hills on the perimeter.

There may be many different types of shoreline on these little man-made waters, but the better ones have deep water nearby and some structural characteristics favorable to bass. Vegetated zones close to deep water are good places to begin searching for bass.

The forage is often shallow in pits and the predators will move to them. Big bass will bury themselves in the heavy cover and wait for their prey. Bluegill, golden shiners, shad and other bait fish species are present in most pits in the southern states.

Pit bass generally prefer the thin-shaped shad or shiners as forage, if they are available. A popular treat for hungry largemouths is also the crayfish which frequent the numerous rocks found in most pits.

Water levels generally vary on many pits connected to a chain of lakes, but where control structures exist to regulate water levels, the spillways and culverts with flowage are often hot spots for feeding bass. The bottom is generally carved out beneath such discharges, and hungry largemouth often lie off to the side of the fast water in four- to six-foot depths, facing the current.

Strips of submerged "islands," are excellent places for bass to corner hapless prey. Cuts in these islands are excellent spots to fish since largemouth generally lie off such areas waiting for schools of bait fish.

Wintertime lure presentations should be slow, as bass are somewhat sluggish then. Winter's real heavyweights come from thick cover or off submerged structure on slow retrieves. Bass then will often be in stuff so thick that they have just a small view out. Submerged brush and rocks provide a sanctuary to many lunker pit bass.

I'll usually fish pit shoreline habitat or offshore shallow cover with crankbaits or plastic worms first, then I'll look for depth changes. This often requires some investigation. If I'm

without a depth finder, a tail-spinner lure or 3/8-ounce slip sinker in front of a worm will enable me to figure out depths and changes in depth. Crankbaits that run to seven or eight feet deep are adequate for making similar evaluation of bottom terrain.

My normal six-hour fishing day on a pit usually results in a limit of bass, which is well above my average production on most other types of water. In Florida, pit fishing is often more productive than fishing natural lakes, when measured on a fish-per-hour basis.

Pit pH Factors

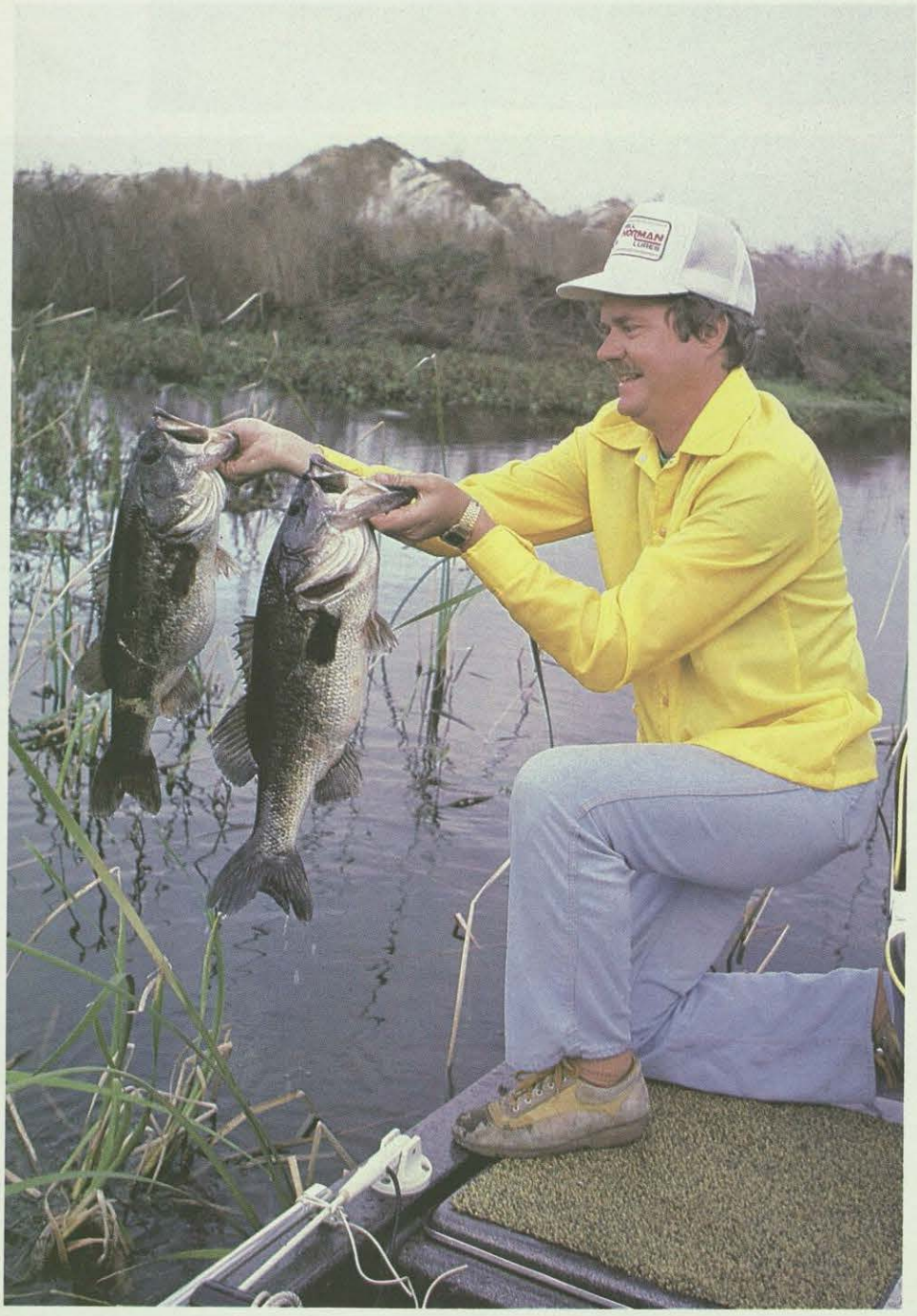
When the first pH meter aimed at the angler's market came out several years ago, I quickly learned its value, particularly on phosphate pits. My pH meter read 6.5 at the upper end of one pit near a crude, dirt launch ramp. The water was only 20 inches deep or so for more than a quarter of a mile until I moved through a bend where several islands stood guard on a major portion of the machine-dug bass water.

The bottom dropped to six feet deep before I felt a need to toss a lure to the heavy cover growing at the pit's edge or around the attractive mid-lake lands. The pH reading was at 6.7 when I hooked my first bass.

The following hours were slow with only two bass jumping at my crankbaits through a small stretch of muddy water. In that area, the pH meter indicated a value of 6.8, the closest yet to the 7.5 to 7.9 reading often said to be optimal for feeding largemouth. ▷

Finally, I had another strike and put a three-pounder in the boat's aerated well. The pH meter read 7.0. That's a way from 7.5 but, on that pit, it was the closest that I found that day. And I had covered most of it. I wondered, could such a small difference in pH values make a difference in catch rate? It didn't take long to find out. Four casts later, I had two chunky bass in the boat, all from the 7.0 pH water.

The experiment continued in another phosphate pit some four miles away. The 40-acre lake was open, with no islands or heavy cover along its shore to slow down a strengthening wind. I began casting the shallow water and let the wind push the boat. After 20 minutes of fruitless casting, the depth dropped to five feet. The pH level was 8.0 when the first largemouth from that pit hit a seven-inch blue worm. For the next 200 yards the action was non-stop until the windward shore shallowed up and the action dwindled back to nothing. The pH kept climbing to a high mark of 8.4 in the final 100 yards of the float.



I slowly motored back to the beginning of the deep water, where the meter read 8.0, and began another pass. Several chunky bass again put a strain on my rod. Two more passes and 16 bass caught and released allowed me time to check the other shoreline. I had drifted from the lee to the windward banks along one shoreline only.

I made two passes over the deep water on the other side, working shoreline similar to that across the lake. Both were without a single strike, but I had learned something; the pH reading rose to 8.9 in the apparently barren water. I returned to the opposite bank for final drift and caught four more keeper-size bass.

Whereas the pH level in the first pit I fished was uniformly below the 7.5 to 7.9 level, the waters in the second pit had a range of 8.0 to 8.9. The closer pH was to the preferred range, the better I found the bass angling that day.

The pH of shallow water is likely to change drastically during the course of the day. Photosynthesis by green plants causes the pH of water to rise. It will also vary on cloudy days and after the sun goes down. For bass, look for water with good habitat that is closest to pH 7.5 to 7.9.

Pit bass are active year-round in Florida. Water temperatures are usually conducive to bass feeding behavior, which makes angling easier. Most man-made waters provide a variety of cover, and angling action can usually be found from a small boat or by casting from the bank.

Lake Talquin After the Drawdown

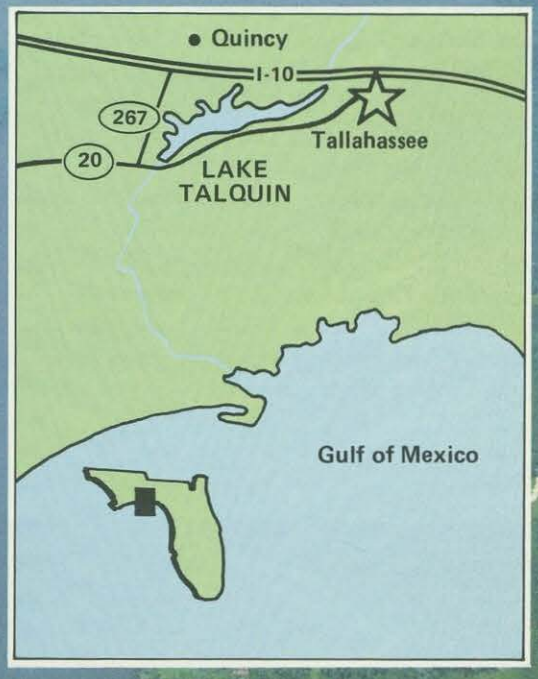
ON THE VERGE OF SOMETHING BIG

By Mark A. Trainor

Photographs by William A. Greer

If you were to rank the best bass fishing lakes in Florida, you probably would list Lake Okeechobee, Lake Kissimmee and Orange Lake near the top, with Lake Tohopekaliga and Lochloosa Lake closely behind. Then again, while these lakes have the reputation of producing big bass year after year, there's a lake in the panhandle region of the state that is primed to become one of the best fishing holes in the state.

Lake Talquin, a 10,000-acre man-made reservoir on the Ochlockonee River between Gadsden and Leon counties, is the showcase for a freshwater fisheries management program designed to rejuvenate the lake into a productive bass fishery. Forrest Ware, Chief of the Commission's Bureau of Fisheries Research, believes Lake Talquin will become a premier bass lake in northern Florida within three years. ▷



"Talquin is a lake where we have a high degree of control over fish and their habitat," Ware explained. "A bass tagging program and experiments with vegetation control will help turn the lake into a first-rate fishery laboratory as well as a good place to fish," he added.

Fisheries biologists began implementing similar programs in the 1970s in lakes Tohopekaliga and Kissimmee. They were successfully restored to productive fisheries by utilizing controlled water drawdowns and experimenting in aquatic vegetation management.

Lake Talquin's bottom has holes as deep as 40 feet and it is heavily littered with logs, submerged tree stumps and trees. It also has grassy points and flats. With the addition of an innovative habitat improvement program being applied by Commission fisheries biologists, Talquin will soon have plenty of keeper-sized largemouth bass, speckled perch and bream.

In 1983, Lake Talquin was drawn down by the City of Tallahassee so that repairs could be made to the Jackson Bluff Dam. Meanwhile, the Commission seized the opportunity to begin restoration of the lake. With the lake virtually drained, biologists were able to clean up the heavy layers of silt from its bottom and encourage the growth of desirable species of aquatic vegetation. Additionally, plots of rye grass were planted along the shoreline to provide temporary habitat for young fish after the lake was refilled, and until aquatic vegetation could become established and grow.

After the lake was refilled in July 1984, Commission biologists documented a 700 percent increase in the number of largemouth bass living in the lake since the time of the drawdown in the fall of 1983. Other species also prospered, with major increases in black crappie, bluegill, shellcracker and catfish populations.

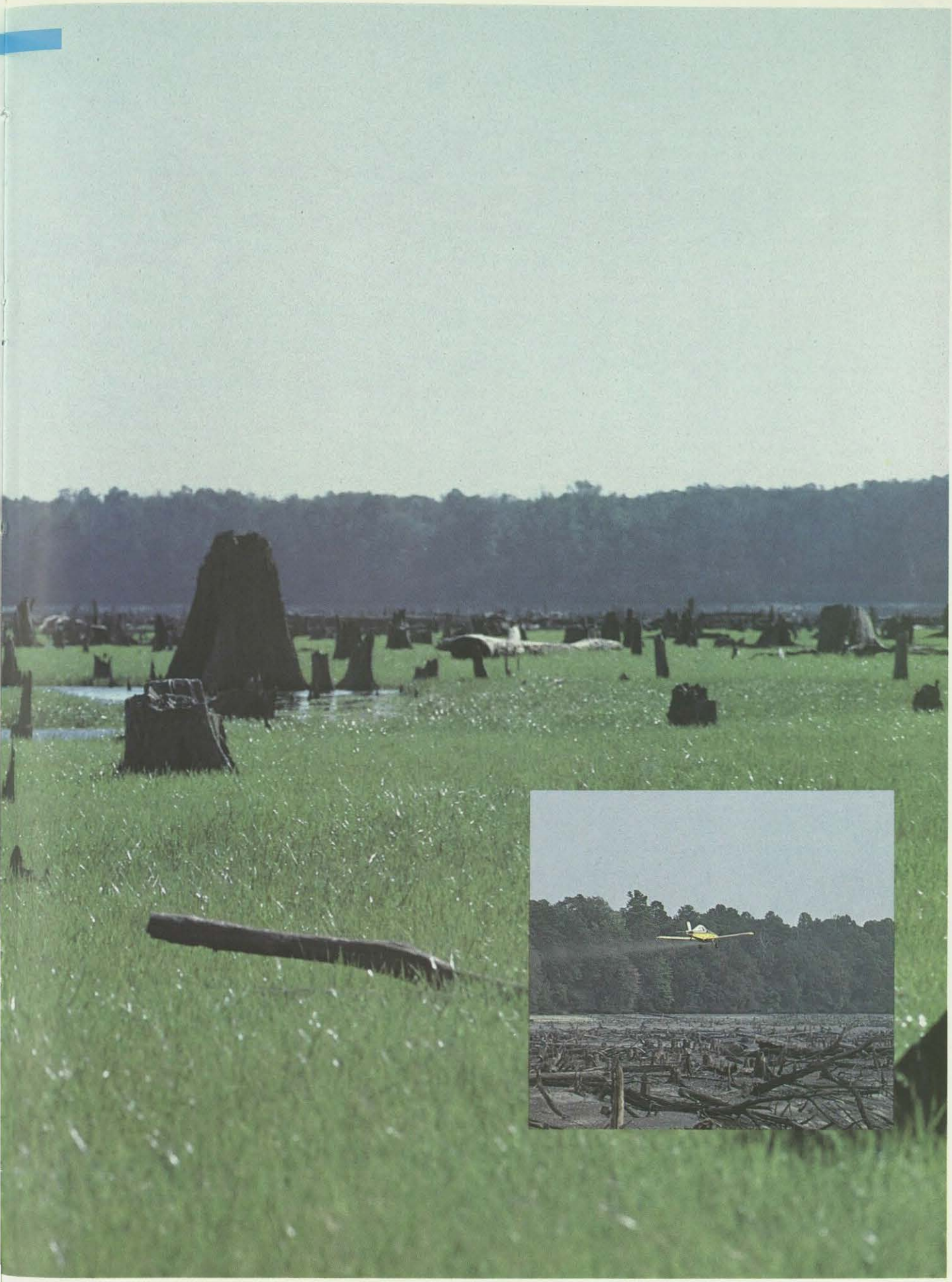
"The new bass crop in Talquin will be ready to catch this year," Ware said. "Many of the post-drawdown bass will reach the two-pound class this summer and fishermen should really enjoy catching them. Any time you draw down a lake and rejuvenate that habitat, it undergoes a very accelerated growth rate that you don't get with normal lakes," he explained.

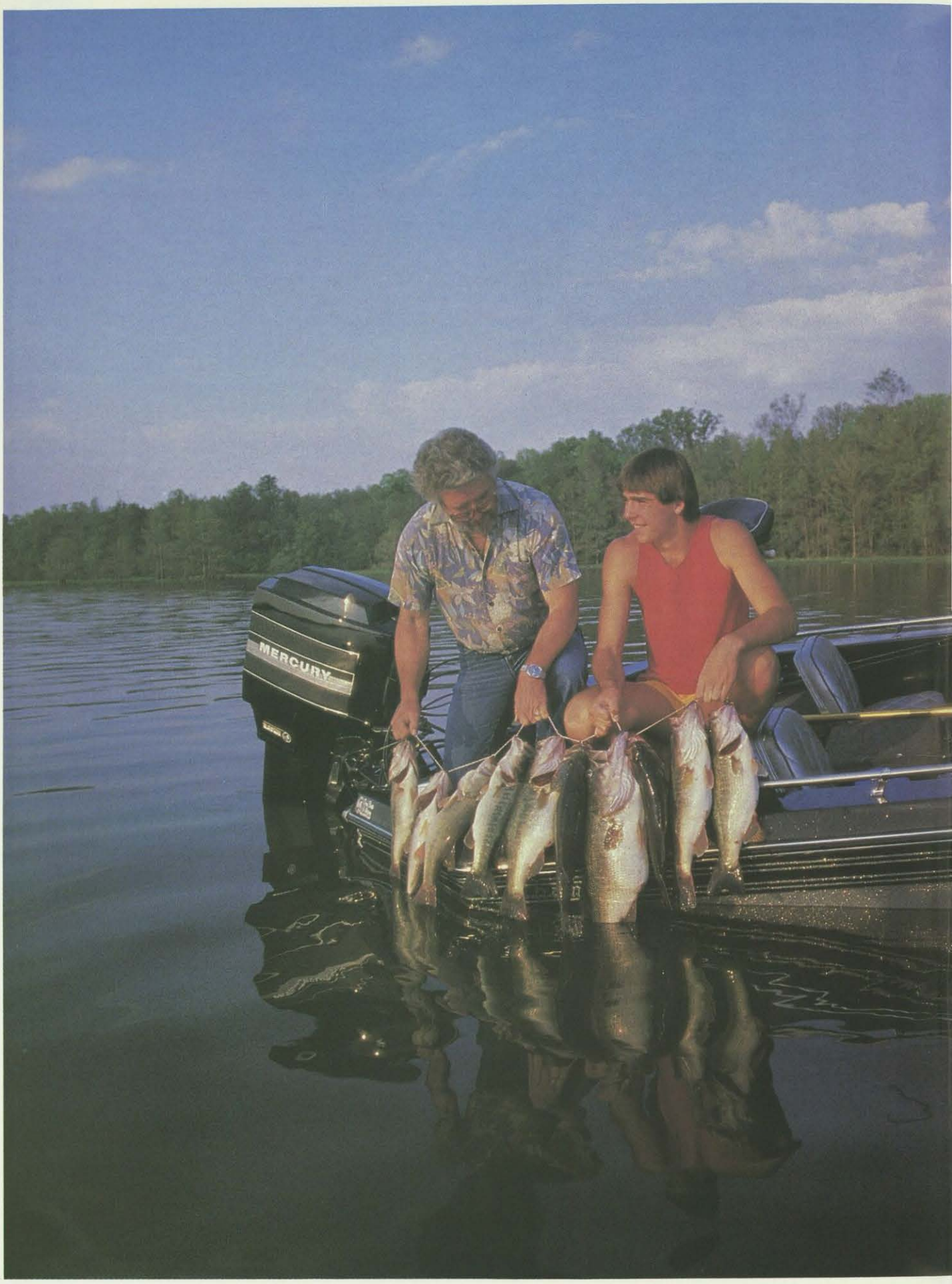
"Talquin will have to undergo another drawdown in seven or eight years to keep the fishery fine-tuned," Ware said. "By the early 1990s, the lake is expected to deteriorate and require another drawdown to be rejuvenated again."

One thing anglers need to know before fishing Lake Talquin is that the Commission has imposed a slot limit for largemouth bass. The regulation makes it illegal to keep any bass between 11 and 14 inches long, but it is legal to keep either smaller or larger bass.

Ware said the slot limit is necessary to protect the bumper crop of bass produced since the lake was drained and refilled. The slot limit is designed to spread ▷

The Commission imposed a slot limit on bass in Lake Talquin in order to protect the bumper bass crop produced since the lake was drained and refilled. The slot limit, for bass between 11 and 14 inches long (above), is designed to spread out the harvest over several years, rather than having a "boom-bust" cycle. While the man-made lake's bottom was exposed, it was planted with rye grass to provide temporary cover for fish and other aquatic organisms once the lake bed was refilled (at right).

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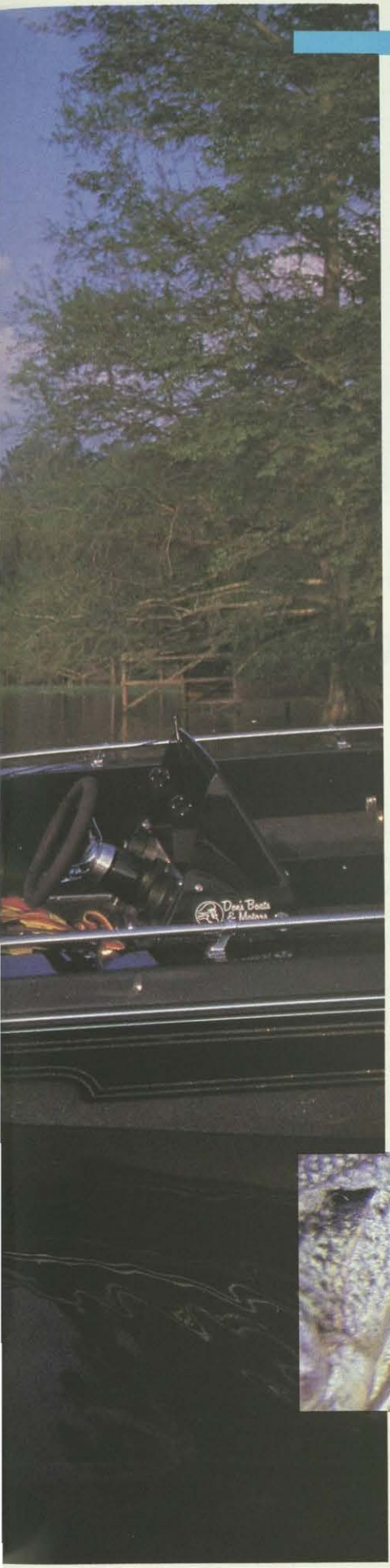


out the harvest evenly over several years, rather than having a "boom-bust" cycle.

"Even with the slot limit," he said, "we are on the verge of seeing some of the best bass fishing anyone has seen in a long time. The bream, shellcracker and speckled perch fishing should also be outstanding."

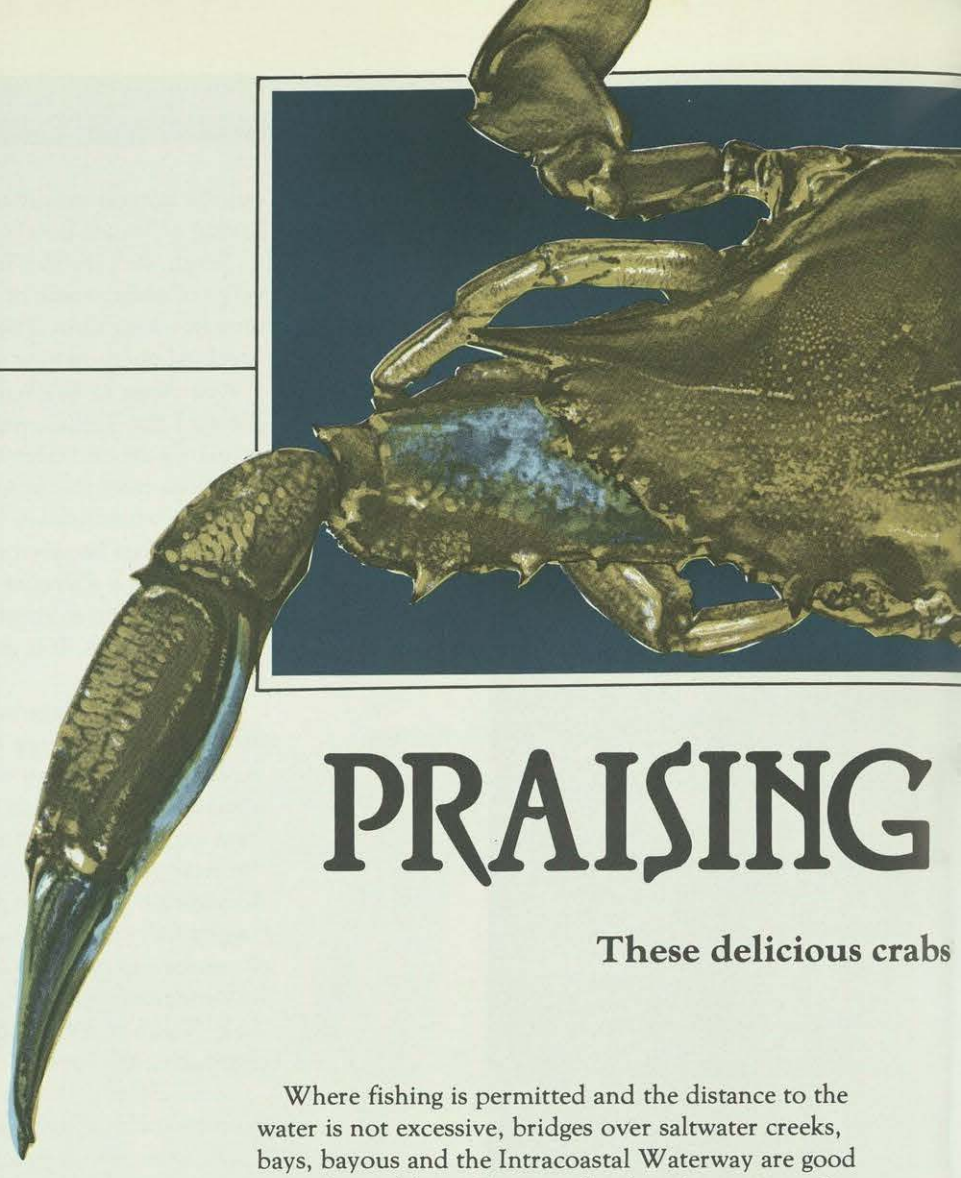
According to Ware, the most popular method for fishing Lake Talquin consistently is worm fishing, primarily around deep structures such as creek channels, trees and stumps. Also, crankbait fishing is effective when fish are holding tight on structure. Most fish are taken between six and 13 feet deep.

"Talquin is a sleeper right now," Ware said, "but I think it's going to show strong improvement over the next three years. It is going to be one of the best lakes in Florida."

About 1,500 largemouth bass and several thousand striped bass have been tagged and released in Talquin by biologists in an effort to gather information on these species. Tag returns by anglers will yield estimates of bass exploitation. A similar tagging program is planned for next year to provide estimates of total survival rate. In addition, lengths and weights were recorded for each tagged fish so that growth rates can be monitored. The Commission is particularly interested in obtaining information concerning tagged bass caught by anglers in Lake Talquin, since those tag returns are crucial to estimating the success of the program.

In an effort to increase the number of tag returns, the Commission is paying a $5 reward for the tags. If you catch a fish that is of legal size and you intend to keep it, remove the whole tag when you clean the fish. If the fish falls into the 11- to 14-inch slot, or is a legal fish that you are not going to keep, snip off the tag and leave the anchor in the fish when it is returned to the water. Anglers who catch a tagged fish should call 904/487-1645 (Tallahassee) between 8 a.m. and 5 p.m. or call 904/265-3676 or (toll-free) 1-800/342-1676 (Panama City) any time.

About 1,500 largemouth bass and several thousand striped bass have been tagged and released in Talquin by Commission fisheries biologists. The Commission is offering a $5 reward for each tag returned.



PRAISING

These delicious crabs

By Frank Meyer

Any activity which offers challenge, relaxation, and a gourmet reward for success has to be both expensive and complicated, right? Wrong! But that belief is exactly what makes blue crabbing one of the best kept secrets shared by coastal residents from Texas to Maine.

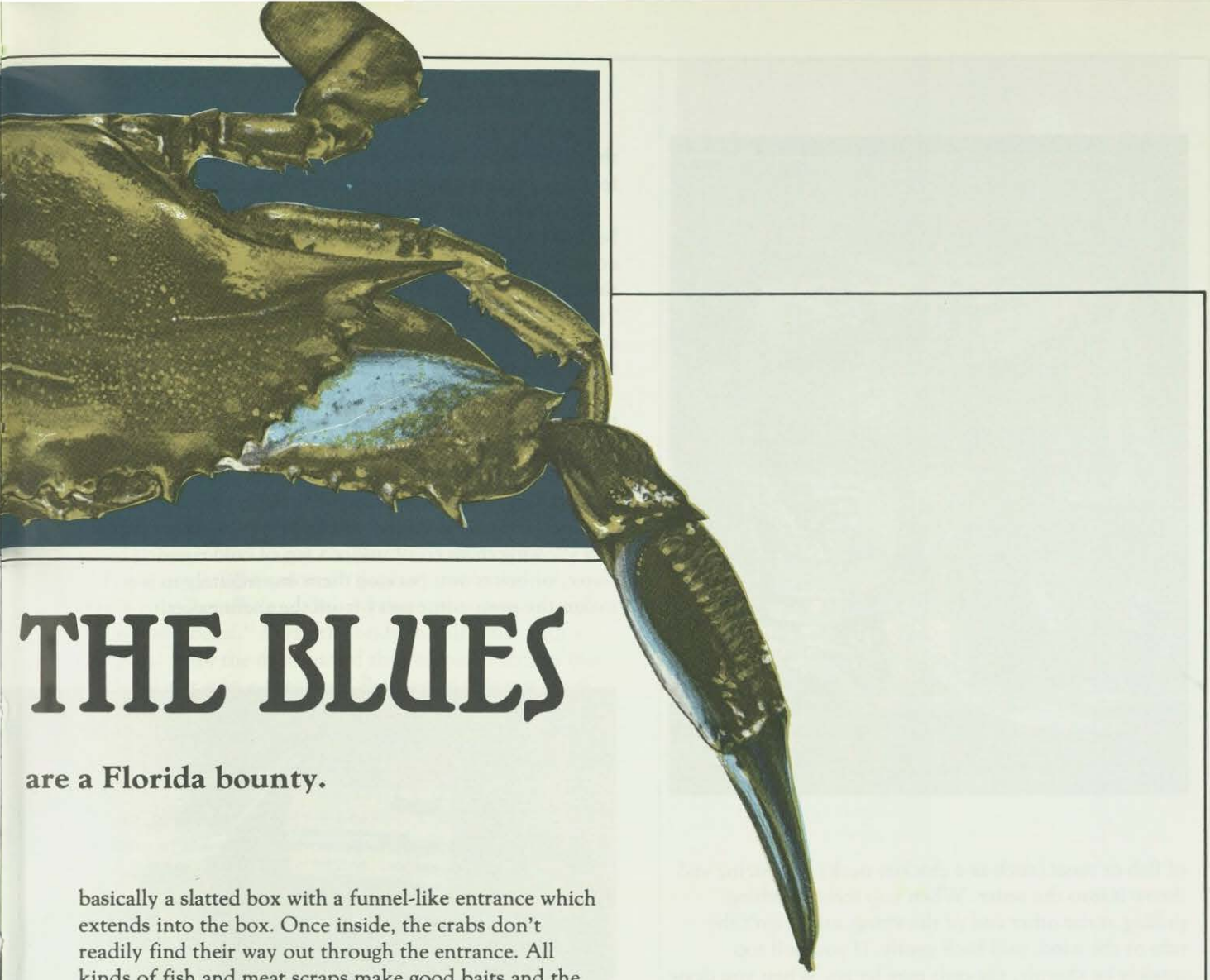
The blue crab's scientific name, *calli*, means "beautiful." Add *nectes*, "swimmer," and *sapidus*, "savory," and you come up with *callinectes sapidus*, a beautiful, savory swimmer. The blue crab is a delicious, valuable crustacean found in most of Florida's salt water and brackish water, and in most freshwater bodies which connect to the sea.

Where fishing is permitted and the distance to the water is not excessive, bridges over saltwater creeks, bays, bayous and the Intracoastal Waterway are good spots for crabbing. Extreme depth isn't necessary. I catch most of my blue crabs in less than three feet of water.

The blue crab spends most of its time walking the bottom looking for food, and it eats almost anything. Although mostly seen walking, when the need arises, the blue crab can swim swiftly and gracefully. Like other crabs, the blue has five pairs of legs—the most forward being the claws, the last being the swimmers. It is said that a healthy adult blue crab can cut your finger to the bone with its claw, which gives you some idea of its strength.

A fully grown blue crab will average five inches between the opposite points of its upper shell. The underside of the body and legs are white. This allows the crab to blend in with the lighter colors of the sky when viewed from below. The top shell is an olive or gray-brown color, which provides protective coloration when viewed against the bottom. The tops of the claws are trimmed in blue, and often have bright red patches.

Most blue crabs are commercially harvested by trapping. The trap style most commonly used is



THE BLUES

are a Florida bounty.

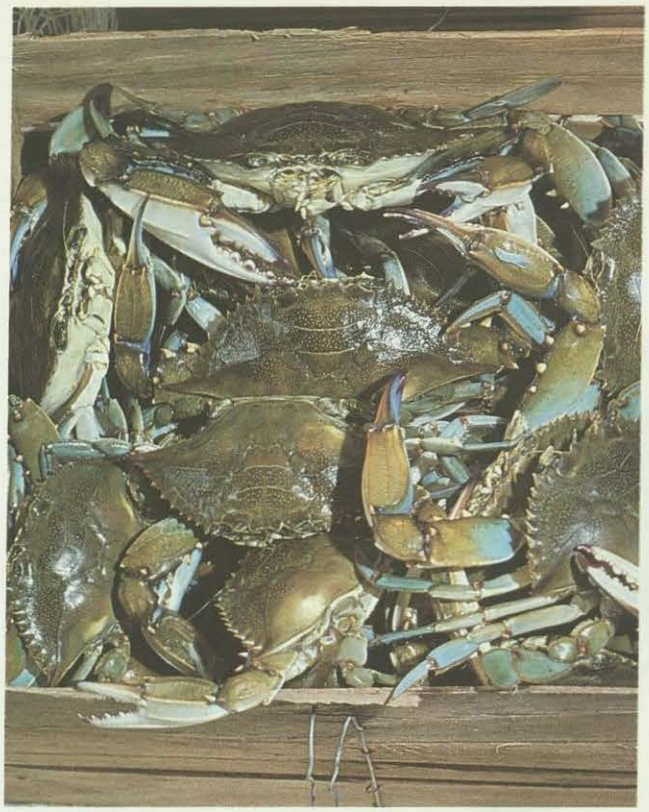
basically a slatted box with a funnel-like entrance which extends into the box. Once inside, the crabs don't readily find their way out through the entrance. All kinds of fish and meat scraps make good baits and the riper they are the better. Many fish markets will give you fish scraps or sell them to you for around 30 cents per pound, which is what they often charge commercial crabbers. Sometimes a can of pet food is punctured repeatedly with an ice pick, then used as bait. The scent of the food in the water is what attracts the crabs.

In Florida, recreational crabbing has no size limits and no possession limits. Up to five traps per person can be used. For commercial uses, permits are required from the Department of Natural Resources.

The two most popular hand-held traps are the pyramid type and the concentric rings type. The former looks like a pyramid made of wire mesh, and stands about a foot high. I bait this type by tying a fish carcass to its bottom with short strands of monofilament line. When lowered straight to the bottom, the sides of the pyramid fold out flat. After a few minutes wait, I pull on the guide string—which folds up the sides of the trap into a pyramid shape—and bring the trap up, hoping to find one or more blue crabs inside.

The less expensive concentric rings type trap is made up of two rings of heavy wire having diameters of 18 and 10-½ inches. These are connected by a mesh net spanning about 10 inches between the rings. The largest ring is on top, and it forms the lip of a "collapsible bucket." Bait is tied to the bottom. The guide string branches into three strands which are tied at even spaces around the larger ring. When the trap is lowered to the bottom, the mesh and rings flatten out. When the guide string is pulled, the mesh encloses the crab on all sides except at the open end of the trap. When this is done quickly, the crab doesn't have time to escape.

You can have just as much success, however, with a much simpler system—a crab net and bait. Tie a piece ▷



of fish or meat (such as a chicken neck) on a string and throw it into the water. When you feel something pulling at the other end of the string, and it isn't the tide or the wind, pull back gently. If you pull too quickly or sharply, the crab may let go. When you draw your prey close enough to see it, net it.

A short-handled landing net may be used, but using it means you have to get close to the crab. A long-handled net lets you keep your distance, and thus increase your catch.

Once caught, long-handled kitchen tongs are helpful for removing the crab from the net or trap. If the mesh of the net or trap is so tangled in its legs, claws and spines that you have to handle it, the best way is to grab the two claws simultaneously, one in each hand, while being careful of the spines, then let someone else do the untangling.

Next, pop your dinner-to-be in a bucket, preferably one with a ventilated top, and keep in the shade until you are ready to head for home. Do not add water. Blue crabs are equipped to breathe in or out of water.

Most cookbooks recommend preparing three blue crabs per person, and this seems about right if you are serving crabs only. However, if you're sampling some of the more interesting recipes, like the ones on page 36, four crabs can provide a three course meal for two.

There are several ways to cook blue crabs. I waiver between steaming and boiling. My most recent conclusions are that blue crabs are best boiled, while their cousins the stone crabs are better steamed. The "meat" is jelly-like when the crab is alive, but the cooking process changes the texture to a sweet, delicate, tender meat.

I boil my live blues whole for eight minutes in water to which I've added fresh lemon slices, celery leaves, peppercorns and hot sauce. You can also use packaged seafood seasoning. Small crabs need less cooking, larger crabs need more. I've found that dumping the crabs out of the boiling water as soon as they're finished cooking, and allowing them to sit under a tap of cold running water, or better yet, packing them immediately in ice, makes the meat come away from the shells easier.

Color Photographs by John Waters Jr.

Picking blue crabs is a chore. This probably is the best argument for serving the crabs whole and chilled, and letting everybody help themselves, but my recipes call for crab meat, so here we go!

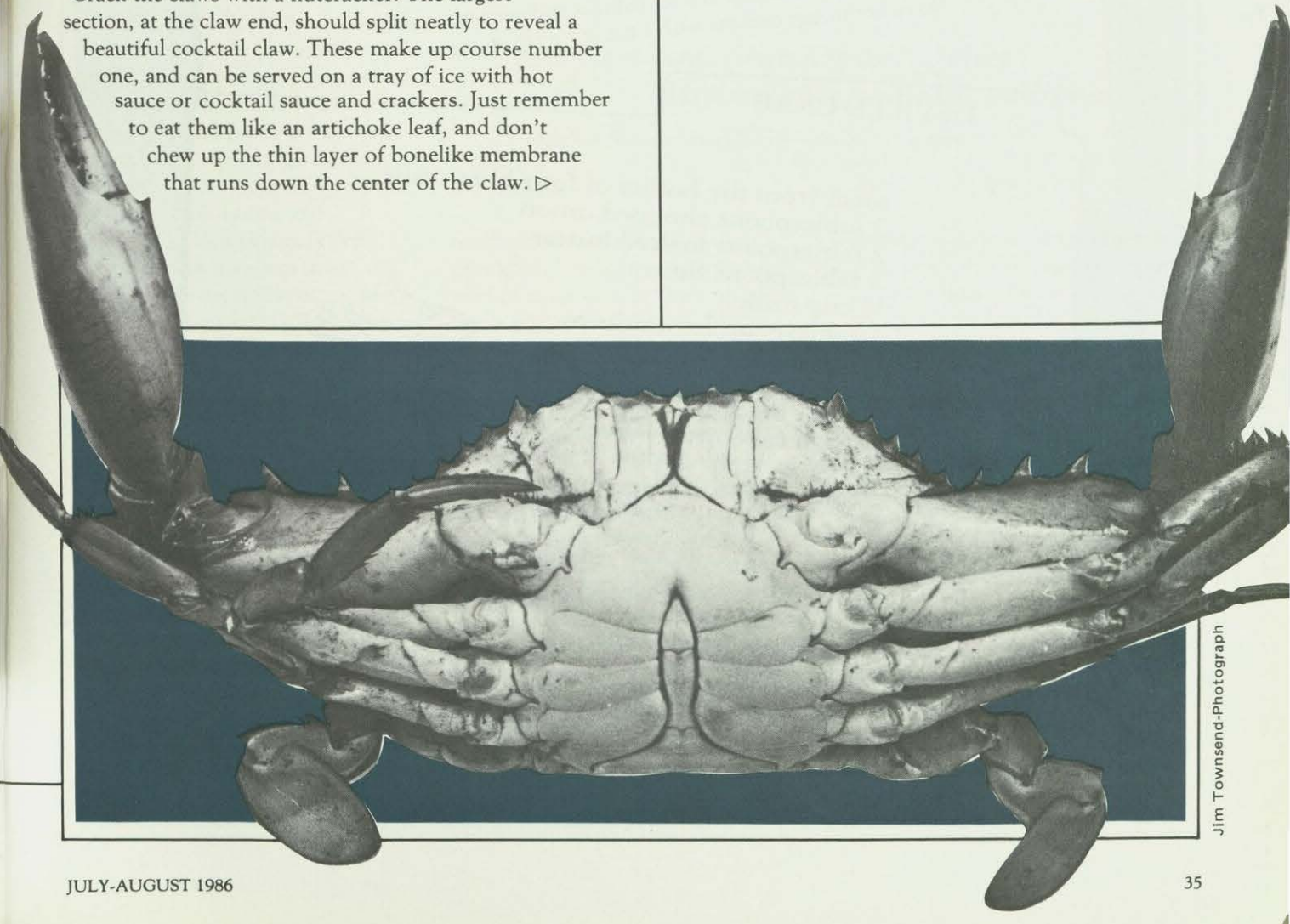
Snap the legs and claws off the body. Put the entire claw (all three sections) in a bowl and refrigerate it while you work on the bodies. Save only exceptionally large legs, unless picking happens to be one of your favorite pastimes. Most of the meat in a blue crab will be found in the lower half of the body.

With a paring knife, loosen the "apron" on the underside of the crab's body and pull it off. Next, pull the top of the shell away from the bottom. The tops of the shells will have turned a beautiful red from cooking. They should be cleaned out, scrubbed with a brush, and saved if you intend to use the deviled crab recipe.

The spongy, light-colored "fingers" inside are the crab's gills. Remove and discard them, then wash away the yellow "coral." Break the body in half, then with a nut pick, work the meat out of the compartments of the shell and put it in a container. Proceed in this way until you have a bowl of crab meat and a pile of shells. If you aren't using the upper shells, double bag and freeze them until garbage day unless you have a permanent head cold.

Crack the claws with a nutcracker. The largest section, at the claw end, should split neatly to reveal a beautiful cocktail claw. These make up course number one, and can be served on a tray of ice with hot sauce or cocktail sauce and crackers. Just remember to eat them like an artichoke leaf, and don't chew up the thin layer of bonelike membrane that runs down the center of the claw. ▷

When blue crabs are boiled, they turn a beautiful red color. The meat is tasty, tender and succulent, but it does take some effort to get the meat out of the shell. In Florida, one traditional way of serving them is on a paper-covered table, and each person "picks their own." A butter knife can be used to crack the shells and dig out much of the meat. The author offers some excellent recipes for using crab meat on the next page. These recipes use only four crabs for enough to serve two persons.



Jim Townsend-Photograph

Use the nutcracker on the second and third joints of the claw and set this meat aside to use in the chowder recipe. This, I think, is the sweetest and most delectable meat in the crab. I find it better than lobster or any other seafood, bar none.

Of course, the true buff would let you clean his blue crab for him as readily as he would loan you his toothbrush. In the traditional crab feed, you catch 'em, cook 'em, spread newspapers out on an old, wooden table in the back yard, and use the handle of a kitchen knife to crack the shell. But others might prefer to try such goodies as deviled crab or crab chowder, so I offer recipes for two people, each made from four crabs.

Whether you get your blue crabs at the market, or catch them yourself, preparing and eating of good old *callinectes sapidus* can provide many enjoyable moments to those willing to make the effort.

CRAB CHOWDER

2 slices bacon
¼ cup chopped onion
¼ cup chopped celery
1 can potato soup
Upper claw meat from four blue crabs

Fry bacon. Remove from pan and drain off half the drippings. Saute onions and celery in remaining bacon drippings until soft. Crumble in bacon. Prepare potato soup as per directions on can. Add celery, onion and bacon mixture. Simmer 20 to 30 minutes. Add crab meat. Simmer 10 more minutes. Season with paprika and pepper to taste. Serve hot in cup or bowl with a pat of butter on top.

DEVILED CRAB

Meat from the bodies of four blue crabs
2 tablespoons chopped onion
2 tablespoons melted butter
2 tablespoons flour
½ cup milk
1 tablespoon lemon juice
1-½ teaspoons salt
6 dashes hot sauce
1 dash black pepper
1 dash cayenne pepper
1 egg, beaten
1 tablespoon chopped parsley

Fry onion in butter. Add flour and milk slowly, stirring constantly. Add lemon juice and seasonings. Add egg, parsley and crab meat. Place mixture in greased shells. Sprinkle with bread crumbs and dot with butter. Bake at 350 degrees for 20 to 25 minutes.

Delicate Balance

"Few birds of the shore and beach are as spectacular [as the oystercatcher]," wrote Alexander Sprunt Jr. in 1954. "It is to be regretted that it is such an uncommon bird in Florida, for it adds much to any beach or island area."

Oyster knives were our tools of choice. With them, we raced the dark for our supper, reluctant to abandon the succulent harvest of a low tide in Florida's Cedar Keys. A chilling January fog dimmed the light of our campfire, a half a mile of choppy canoeing away.

Our dining partners, winter flocks of American oystercatchers, numbered in the hundreds, maybe even thousands. We could scarcely see them in the mist, but their clear piping calls rang out as they winged swiftly to a distant roost.

I can't imagine better dinner companions than a thousand birds. And I still don't mind eating in my canoe and I haven't yet tired of oysters. But I don't expect many future reruns of that long-ago night. Oystercatchers aren't doing very well in Florida these days.

These large boldly patterned shorebirds seem perfectly adapted to a salty existence on Florida's barrier islands and coastal marshes. You'll rarely find them far from their primary food sources—shellfish, marine worms and crustaceans. Thick pale pink feet help these birds maintain their balance on the most precarious of oyster beds, though they'll wade belly-deep or even swim in search of food. Their brilliant, chisel-tipped bills closely resemble our modern, though less colorful, oyster knives.

Oystercatchers formerly nested along the entire coast of Florida, and were joined in the winter months by migrants from the East Coast states. Although no firm population counts are available, biologists report that oystercatchers have become rare and very local in distribution in our state. Nesting habitat is a major limiting factor.

The Commission's Critical Wildlife Area Program may help the oystercatcher coexist with humans. Through this management program, essential nesting, roosting and feeding areas are identified and protected. The idea is to determine the key times of year that a species needs protection from disturbance; for example, to reproduce and rear their young. Fourteen such sites have been designated so far, many of them in important shorebird nesting areas. In the case of the oystercatcher, only a small two-month window of time is needed to incubate eggs and rear young. A careful education and management program can help ensure that the birds get this all important interval; humans may use the area the remaining months of the year.

Young oystercatchers are reared in simple sandscrapes above the high tide line, along with only a few other species such as least terns and certain plovers. Unlike their nesting neighbors, oystercatchers lack protective coloring. In earlier days, sheer size and alert defenses enabled adult birds to protect their eggs and young from marauding crows and other predators, but now the threats to nestlings are more than a vigilant parent can handle: beachfront development, unthinking picnickers, anglers and dogs.

We need the noisy and restless company of oystercatchers, whistling through the winter darkness. We need to see them slowly pace a shimmering summer beach, and to afford our children the chance to marvel at that enormous crimson bill. Like many threatened creatures, oystercatchers aren't adapting well to human alterations of the Florida coast. But that is surely their only fault.

—Susan Cerulean

Lynn M. Stone-Photograph

Species: American Oystercatcher (*Haematopos palliatus palliatus*)

Florida Status: Species of Special Concern

Wildlife IN·ART

Our search for a work of art to be used for this issue's cover and FLORIDA WILDLIFE'S annual fine print offer resulted in the judges having to make critical choices among a number of very fine works. Art Biro's watercolor of wood ducks rising over a wooded pond was the final choice, but Shelley Brunken's color scratchboard of bobwhites was a very close second. Viewing the original paintings was such a pleasure that we decided to share some of the best ones with you. And, we hope you'll turn to page 41 to find out how you can own a signed, numbered, full color print edition of Biro's beautiful original.

AMERICAN WIDGEON AND REDHEAD DUCKS, Mike Harrell

BOBWHITE QUAIL, Shelley Brunken

WHITE—TAILED DEER, Carol Kelley Gross

WILD TURKEY IN HABITAT, Charles Walker

WILD TURKEY IN HABITAT, Jim Dollar

Overall Size: 17" H x 25" W. Image Size: 11 1/2" H x 17" W. Frame not included. Limited edition of 1,000 signed prints.

WOOD · DUCKS

A Colorful Art Print for You

Many people consider the wood duck our most beautiful native duck. The drake, with its colorful bill and crested head, rich maroon breast and vivid sides rivals the beauty of any duck. The hen is somewhat drab in color. This characteristic has an adantage of making the female much less visible while nesting, and thus less likely to be found by a predator.

Wood ducks nest in hollows in trees both near and sometimes far from water, where they typically lay 10 to 15 eggs. When the young hatch, they leave the nest shortly thereafter, even though they cannot fly at this time. They fall to the ground or water, landing like little balls of down, thus experiencing their first encounter with survival in the wild, even before they begin to feed. Hatchlings, can walk and swim, and will follow the hen as she teaches them to feed and avoid predators by instinctive demonstration.

Wood ducks prefer freshwater marshes, swamps and creeks, a habitat type that has been much reduced in Florida during recent decades. With many bottomland hardwood swamps now gone, there are fewer nesting trees available as well as less freshwater habitat. Wood ducks readily accept and use man-made nest boxes, and making them is a popular activity with conservationists.

A Full-Color Art Print of Your Own!

When you purchase three new one-year FLORIDA WILDLIFE subscriptions, at the regular price of only $7 each ($21 total), we will give you a handsome, full-color print of this issue's cover Art Biro, the St. Petersburg artist who created the original work from which our fine quality print was reproduced, will sign and number a limited edition of only 1,000 for this special offer.

The prints have an image size the same as our cover, but are printed on a large sheet (17" x 25") with a border for matting and framing. Also, the prints do not have our title on them, and are printed on a heavy matte-finish stock. We know you will be pleased to own one, and you can enjoy the extra pleasure of giving three of your favorite people six colorful issues of FLORIDA WILDLIFE.

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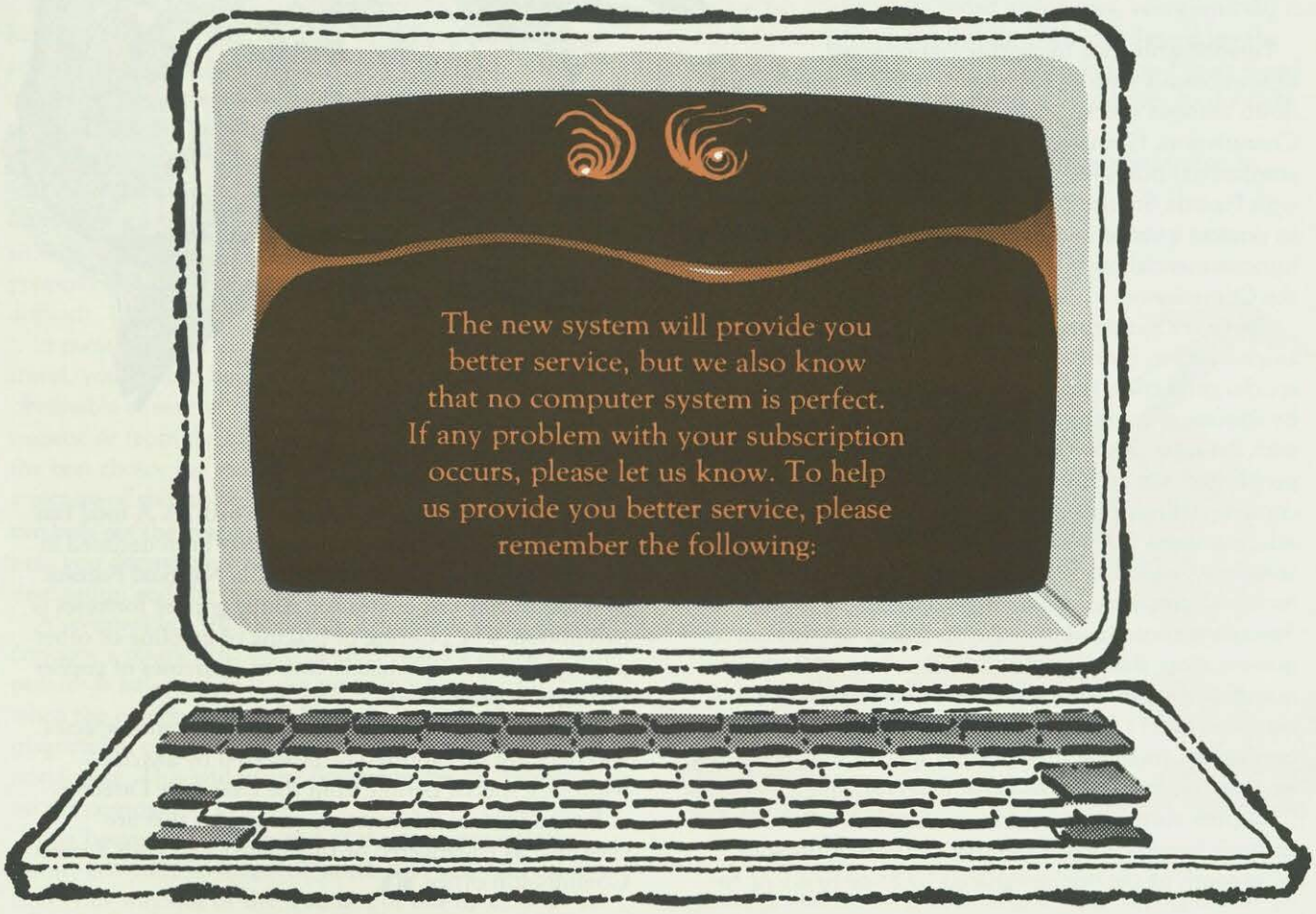
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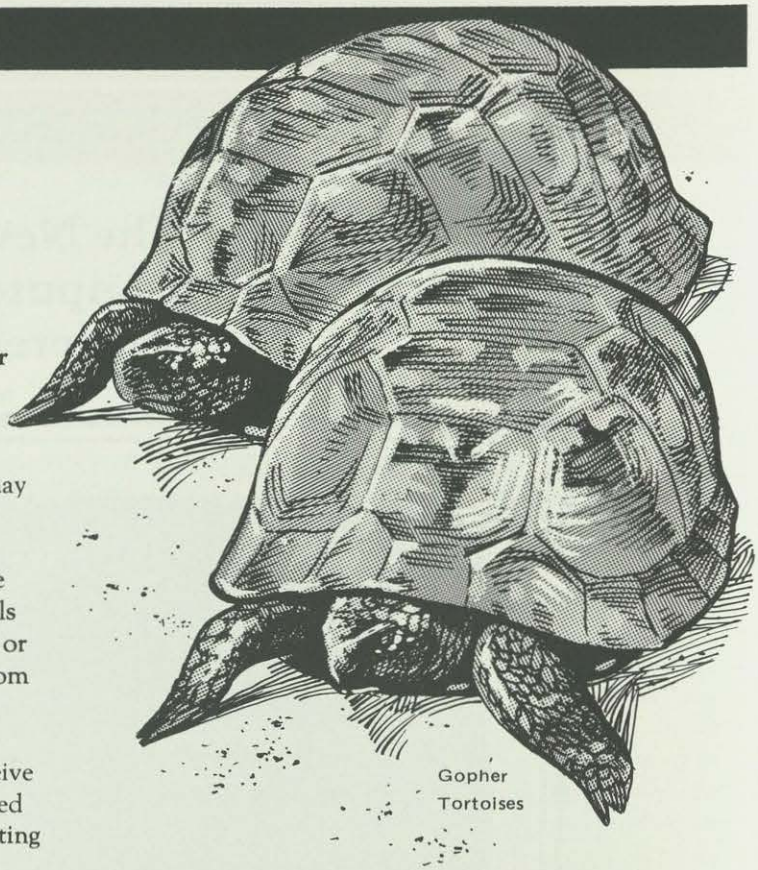
Thank you!

It's The Law

By Major Kyle Hill



Gopher Tortoises

What are the restrictions on collecting gopher tortoises and other reptiles in Florida?

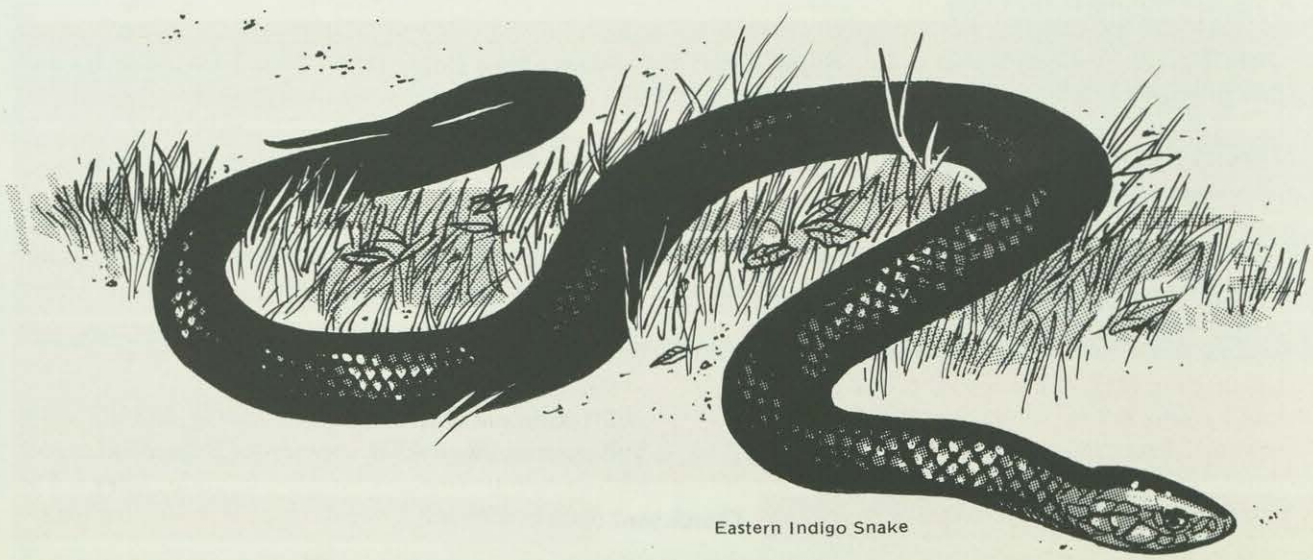
Persons who wish to capture unprotected, nonvenomous reptiles for noncommercial reasons may do so without special authorization from the Commission. However, individuals collecting for commercial purposes must be licensed in accordance with Florida Statute 372.921. In order for individuals to possess a venomous reptile for either commercial or noncommercial purposes, a $5 license is required from the Commission.

There are numerous protected reptiles and amphibians in Florida. Alligators and crocodiles receive special protection and are not to be taken or possessed by anyone at any time. The taking of turtles by shooting with firearms or use of bucket traps or snares is prohibited. Certain turtles are protected from commercialization or over-harvest. It is unlawful to buy, sell or possess for sale any gopher tortoise, alligator snapping turtle, Florida box turtle, Gulf Coast box turtle, Florida pine snake, Barbour's map turtle or Suwannee cooter and it is also illegal for any person to possess more than two gopher tortoises, two Barbour's map turtles or Suwannee cooters, two Florida box turtles or Gulf Coast box turtles, one Florida pine snake or alligator snapping turtle unless specifically authorized by a permit from the Executive Director.

Gopher tortoises may be taken from October 1 through January 1 except in that portion of the state lying south of the line designated by State Road 72 to Arcadia and eastward along State Road 70. A total ban on the harvest of gopher tortoises has been declared in the Ocala, Osceola and Apalachicola National Forests. The use of traps or snares for taking gopher tortoises is prohibited. The pouring or placing of gasoline or other potentially toxic substances into the burrows of gopher tortoises is prohibited.

The indigo snake is classified as a threatened species and may not be captured or possessed by anyone without a special permit from the Executive Director.

For additional information on reptiles that are classified as endangered or threatened, call your nearest Commission office.



Eastern Indigo Snake

Hunter Education News

By Lt. Byron Stalvey
Hunter Education Officer

Each year, a few outdoorsmen become lost while hunting, fishing or participating in some other outdoor activity. Some are just "temporarily confused," while others are hopelessly lost and must depend on rescuers to find them. By learning and practicing a few simple procedures, outdoor users can avoid becoming lost.

A map and compass, at least at first, seem to intimidate a lot of folks. Many people feel they must be an engineer before they can begin to understand how to properly use these helpful tools, but it's really not that difficult.

In most outdoor activities that involve overland travel, you should have a map. Topographic maps, obtainable at several Florida book stores and other outlets, or from the U.S. Geological Survey, are usually the best choice for today's sportsman. A map is simply a picture of the landscape of your area. The map symbols are the language of the map. These symbols can help you determine where you are, find your intended destination and the best route there.

A compass is a simple device, consisting of a case that contains a magnetized strip of steel called a pointer. The pointer is balanced so it can pivot in a circular direction when the compass is level. Since the needle is magnetized, one end will point to the Earth's magnetic north pole. This end of the pointer is clearly indicated on the compass.

It is because the north end of the compass pointer points generally to magnetic north that you can use it to find your way out of the woods. For example, let's assume you are hunting in the Ocala National Forest. You park your vehicle on Forest Road 65 which runs north and south and you walk from there in a westerly direction. During the day, you follow several sets of deer tracks in hopes of catching a glimpse of that big buck you know just has to be in the area. Suddenly however, you realize you've been concentrating on finding deer and not the direction you were going. To make matters worse, a cold front has moved through the area, it's now cloudy and drizzling rain and you are lost.

What do you do? You're cold, wet and lost. Your mind can begin to play tricks on you. You may think "What will my friends say about me being lost? How embarrassing!" Fear can begin to take control if you let it, so don't. If you're lost, *admit it*, and stay calm. If you panic, you're setting yourself up to make your situation much worse than it really is. So think rationally.

If your field gear included a compass, you could dig it out of your pack, hold it waist high and determine the direction of magnetic north. To get back to Forest Road 65 you must travel east, which is 90 degrees to the right if you are facing north.

Now that summer is here, it's an excellent time to

practice and develop your map reading and compass skills. Learning map and compass use is also an excellent family activity, and it provides an opportunity for parents and children to learn and grow together, and it enhances appreciation for the outdoors. It can be a challenging fun-filled time for everyone.

If you would like to learn more about map reading and compass skills, there are many good source books and materials that are available. One of the best books for the beginner is *Be Expert with Map and Compass*, by Bjorn Kjellstrom. It will take you step by step through the proper use of both maps and compass. Many of the book's suggested activities are designed to make learning both educational and fun.

If you would like more information on learning these and other outdoor skills, contact the Hunter Education Officer at your nearest Commission Region Office. The telephone number is listed in front of most telephone directories and on page 48.

Conservation Update

By John Waters Jr.

The Sturgeon Is a Mystery

Although the sturgeon is considered a marine fish, it does venture into some of Florida's freshwater streams, where it is believed to spawn. However, neither the sturgeon's spawn nor larval fish have been reported as having been collected in the wild in Florida, so there remains some speculation about where, how and when this species reproduces here.

Florida once had a viable commercial fishery for sturgeon, but legal harvest was closed in 1984. By that year, the Suwannee River population was seriously depleted, and scientists were convinced the resource was in dire need of help. Now, scientific studies are being conducted to learn more about their life history in hopes of rebuilding the population.

Sturgeons may grow to 12 feet long and weigh 300 pounds or more. Males are smaller than the females. It is estimated that adults may require as long as 20 years to reach sexual maturity. Females may produce as many as two million eggs, which have long been considered a delicacy by man. *Caviar* is the name given to the sturgeon's black-colored eggs. Because of the decline of this valuable species in this country, most of the caviar consumed here now comes from the Soviet Union.

Sturgeons have a tubular mouth which can be extended to suck up small organisms from the bottom, and they spend much of their time swimming close to the bottom. Adults have four sensitive barbels between the mouth and the snout which apparently help detect food items. Their primitive skeleton is composed largely of cartilage and they are covered with large plates (scutes) instead of scales.

The Suwannee population is thought to spawn upstream from the junction of the Santa Fe and the Suwannee rivers, but downstream from the white-water area above White Springs.

61 WMAs Are Open for 1986/87

For the upcoming Florida fall hunting season, 61 Type I Wildlife Management Areas will be operated by the Commission for public use. Nearly 4.4 million acres of land will be available for hunting, fishing and other activities that are permitted in the Type I area during 1986-87.

Type I Wildlife Management Areas are primarily lands secured through lease or other agreement by the Commission specifically for controlled use by the public. Florida is very fortunate to enjoy the benefits made possible by cooperation of landowners including timber companies and other state and federal agencies.

The average size for Type I areas is about 74,000 acres, but individually they range from a few hundred acres, such as IMC (owned by International Minerals and Chemical Corporation), to the 710,000 acres of Everglades and Francis S. Taylor WMA. Game hunting opportunities on these lands, however, have been in very high demand in recent years and most areas now have quota regulations which limit the number of persons permitted on them during peak times of the year, such as the first nine days of open season. Last year, 54,000 special and regular quota hunt applications were processed.

Additionally, 12 Type II Wildlife Management Areas totalling 1.6 million acres are operated by landowners in cooperation with the Commission to provide similar outdoor recreational opportunities.

Persons wishing to pursue recreational opportunities on Type I areas may do so by purchasing a Wildlife Management Area Stamp from a Florida county tax collector. A permit to use a Type II Wildlife Management Area must be obtained from the landowner.

For many Floridians, who do not own land suitable for outdoor recreation, the opportunity to hunt would not be available except for the Commission's WMA program and the cooperating landowners. Not only has increasing human population in the state competed with game animal populations, but urbanization and other land uses such as agriculture have also contributed to a decline in lands available for hunting.

Panther Crossbreeding Experiment Underway

The Commission has obtained two female western panthers from Texas, which will be used for an experimental captive breeding program with a male Florida panther which has been kept since November 1984. The experiment is part of the Florida Panther Recovery Plan, and has a goal of determining the feasibility of captive breeding pure Florida panthers for reestablishment into suitable parts of the endangered species' former range.

Offspring from the Texas and Florida cats will be sterilized prior to their release into the wild. Biologists will then conduct studies of their survival, and other factors which need to be determined before the technique is used for captive breeding of purebred Florida panthers. The sterilization procedure will ensure that the Texas/Florida offspring will not interbreed with the very small remaining wild population of native Florida panthers.

Allan L. Egbert, Ph.D.

Frank Montalbano

Commission Names New Executives

Allan L. Egbert, Ph.D. has been named as assistant executive director for the Commission, following retirement of former assistant executive director F. G. Banks in June. Egbert has served most recently as director of the Division of Wildlife, and has been with the Commission since 1977.

Frank Montalbano has been appointed to replace Egbert as director of the Division of Wildlife, following a recent tenure as assistant director of the division. Montalbano has been with the Commission since 1974.

Bacteria May Help Control Mosquitoes

Bacillus thuringiensis israilensis may be a mouthful of Latin words for the nonscientist, but it is really nothing more than the scientific name of a bacteria that has been used for a number of years as a biological pest control. First mass marketed by Abbot Laboratories of Chicago, the pesticide is packaged in a dry form similar to baker's yeast.

Organic gardeners have embraced Bti , as a safe, effective control for many insect larvae species that prefer such delicacies as fresh tomatoes, pole beans and squash. However, its use recently has been extended to mosquito control, following experiments which indicate its presence in freshwater systems does no harm to them nor the more desirable living organisms living there.

Bti works in a rather simple way. By being present in the environment of the pest organism, it is ingested into the organism's gastrointestinal tract. Once inside a mosquito larvae, the scientists explain, it affects the pH balance of the larvae's stomach to such a degree that it kills it.

Florida Trail Needs your Help

The Florida Trail is the pet project of a small organization which depends largely on volunteer efforts to keep the trail open enough for hikers to walk from one point on the trail to another. Just keeping the vegetation cleared is a major ongoing task. The Florida Trail Association has hacked out more than 900 miles of hiking pathways in the state during the last 20 years, but still there are gaps in parts of the planned trail system.

In 1983, Congress responded to the association's plea to give a special designation to the Florida Trail and it is now scheduled to become known as the Florida National Scenic Trail. However, this will not happen soon. Only about 65 percent of the 925 linear miles now included in the trail system are completed and eligible for the Congressional recognition. The completed trail plan would include an unbroken hiking route of about 1,300 miles if finished. Closing the gaps is expected to be a major task in uniting the various completed segments of the trail system.

Nature Notes

American Bison (Buffalo) Tongues *were considered a delicacy a century ago, and there was a great market for them in the East. Many bison were killed by commercial hunters, and only their tongues taken for sale at 25 cents apiece—a high price in those years.*

Canvasback Ducks *have been clocked at flying speeds greater than 70 miles per hour.*

North America *has only a single species of porcupine. This species has only one young at a time, which can climb trees and feed on vegetation when just two days old.*

The Florida Panther, *an animal which is more endangered than China's panda, continues to suffer deaths on south Florida highways. Collisions with traffic are the primary cause of death for this rare feline.*

Alligator Snapping Turtles, *which inhabit Florida, are the largest known freshwater turtles. They may reach 200 pounds in weight. Surprisingly little is known of their life history and habits.*

Black Ducks *continue to decline, with the present population being estimated at less than half what it was 30 years ago.*

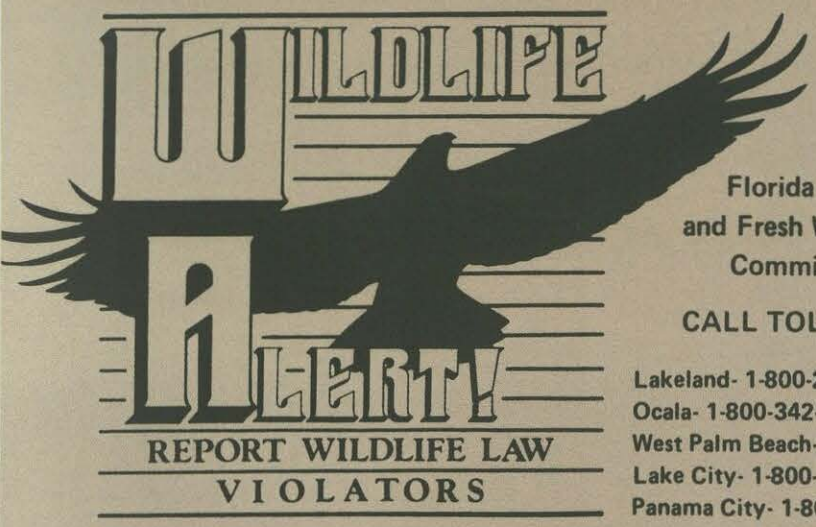
The Rhinoceros, *now native only to Africa and small parts of Asia, once roamed in Florida. A nearly complete fossilized skeleton was found near Newberry.*

Rattlesnake Bites *have been responsible for only two deaths in Florida during the past five years.*

Alcohol Is Involved *in 70 percent of the boating accidents in this country, says an organization of boat owners. Many boaters fail to consider that boating while drinking can be as deadly as driving an automobile while drinking.*

Florida's Pelican Island *was the first land set aside as a national wildlife refuge. It was encouraged by the Audubon Society and officialized by President Theodore Roosevelt in 1903.*

Meat From Game and Fish *is generally very low in cholestrol. Venison has only about three percent fat, for example.*



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This publication was produced at an annual cost of $48,298, or $1.67 per copy, to provide information to the public about wildlife resources and their conservation. Subscription revenues defray a substantial portion of the above-listed cost of magazine production.

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Floridana

Over the years of the Territory and State of Florida's history, many laws were passed to protect game and fish populations and regulate their taking and use. During the 101-year period 1828-1929, some of the most far reaching laws were passed. A few of the more notable ones are listed here with the year they were passed by the Legislature:

1828 Fire hunting was first prohibited west of the Suwannee River, then later that year, throughout the Florida Territory.

1832 Damming of navigable streams so as to prevent the passage of fish upstream for more than 24 hours was prohibited.

1859 Hunting on Sunday was prohibited.

1875 A $25 license was required for nonresidents to hunt in the state.

1877 Taking of "plumage birds," or molesting their eggs and young was prohibited.

1888 Open deer season was fixed from September 1st to April 1st.

1893 Exporting of game from Florida was prohibited.

1895 Florida became the first state to establish a bag limit for turkey.

1895 Sale of venison outside the home county was prohibited.

1895 Taking of fish by seining, netting, gigging or dynamiting was prohibited.

1897 Employment of county game wardens was authorized.

1902 Florida created the first federal bird reservation in the United States.

1903 Sale of venison, wild deer or their hides was prohibited.

1913 The Florida Department of Game and Fish was created.

1915 Department of Game and Fish was abolished and the Shell Fish Commission created.

1925 Department of Game and Fresh Water Fish was created.

1927 Florida Game and Fresh Water Fish Commission created as a statutory agency.

NOTE: The present Game and Fresh Water Fish Commission was created by a 1943 amendment to the Florida Constitution.

—John Waters Jr.